

MAGNAVOX

SERVICE MANUAL

Main Section

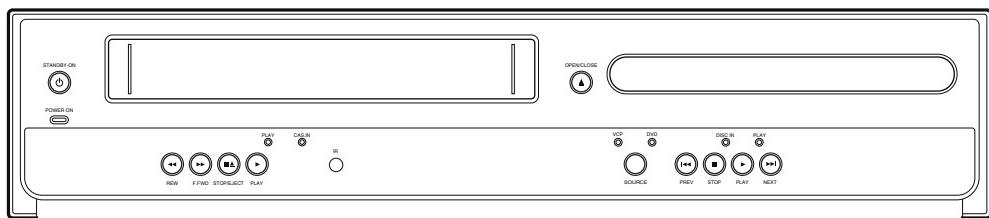
- Specifications
- Preparation for Servicing
- Adjustment Procedures
- Schematic Diagrams
- CBA's
- Exploded Views
- Parts List

When servicing the deck mechanism, refer to MK14 Deck Mechanism Section.

Deck Mechanism Part No.:
N2440FL

DVD PLAYER & VIDEO CASSETTE PLAYER

DV200MW8



IMPORTANT SAFETY NOTICE

Proper service and repair is important to the safe, reliable operation of all Funai Equipment. The service procedures recommended by Funai and described in this service manual are effective methods of performing service operations. Some of these service special tools should be used when and as recommended.

It is important to note that this service manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It also is important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. Funai could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, Funai has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by Funai must first use all precautions thoroughly so that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.

MAIN SECTION

DVD PLAYER & VIDEO CASSETTE PLAYER

DV200MW8

Main Section

- Specifications
- Preparation for Servicing
- Adjustment Procedures
- Schematic Diagrams
- CBA's
- Exploded Views
- Parts List

TABLE OF CONTENTS

Specifications	1-1-1
Laser Beam Safety Precautions	1-2-1
Important Safety Precautions	1-3-1
Standard Notes for Servicing	1-4-1
Preparation for Servicing.	1-5-1
Cabinet Disassembly Instructions.	1-6-1
Electrical Adjustment Instructions.	1-7-1
How to Initialize the DVD Player & VCP	1-8-1
Firmware Renewal Mode	1-9-1
Function Indicator Symbols.	1-10-1
Block Diagrams.	1-11-1
Schematic Diagrams / CBA's and Test Points.	1-12-1
Waveforms	1-13-1
Wiring Diagram < VCP Section >	1-14-1
Wiring Diagram < DVD Section >	1-14-2
System Control Timing Charts	1-15-1
IC Pin Function Descriptions.	1-16-1
Lead Identifications	1-17-1
Exploded Views.	1-18-1
Mechanical Parts List	1-19-1
Electrical Parts List	1-20-1

SPECIFICATIONS

< VCP Section >

Description	Unit	Minimum	Nominal	Maximum	Remark
1. Video					
1-1. Video Output (PB)	Vp-p	0.8	1.0	1.2	SP Mode
1-2. Video S/N Y (PB)	dB	40	45		SP Mode, W/O Burst
1-3. Video Color S/N AM (PB)	dB	35	41		SP Mode
1-4. Video Color S/N PM (PB)	dB	33	36		SP Mode
1-5. Resolution (PB)	Line	230	245		SP Mode
2. Servo					
2-1. Jitter Low	μsec		0.07	0.12	SP Mode
2-2. Wow & Flutter	%		0.3	0.5	SP Mode
3. Normal Audio					
3-1. Output (PB)	dBV	-9	-6	-3	SP Mode
3-2. S/N (PB)	dB	36	41		SP Mode
3-3. Distortion (PB)	%		1.0	4.0	SP Mode
3-4. Freq. resp (PB) at 200 Hz (-20 dB ref. 1 kHz) at 8 kHz	dB	-11	-4		SP Mode
	dB	-14	-4		SP Mode

Note: Nominal specs represent the design specs. All units should be able to approximate these – some will exceed and some may drop slightly below these specs. Limit specs represent the absolute worst condition that still might be considered acceptable; In no case should a unit fail to meet limit specs.

< DVD Section >

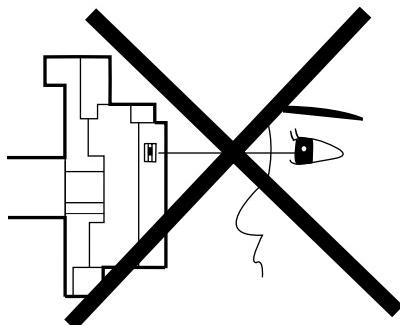
Item	Conditions	Unit	Nominal	Limit
1. Video Output	75 Ω load	Vpp	1.0	± 0.1
2. Coaxial Digital Out	75 Ω load	mVpp	500	± 50
3. Audio (PCM)				
3-1. Output Level	1 kHz, 0 dB, 47k Ω load	Vrms	2.0	
3-2. S/N	47k Ω load	dB	100	
3-3. Freq. Response				
DVD	fs = 48 kHz ± 0.5 dB, 47k Ω load	Hz	20 ~ 22 k	
CD	fs = 44.1 kHz ± 0.5 dB, 47k Ω load	Hz	20 ~ 20 k	
3-4. THD+N				
DVD	1 kHz, 0 dB, 47k Ω load	%	0.01	
CD	1 kHz, 0 dB, 47k Ω load	%	0.01	

Notes:

- All Items are measured without pre-emphasis unless otherwise specified.
- Power supply: AC 120 V, 60 Hz
- Ambient Temperature: +25 °C

LASER BEAM SAFETY PRECAUTIONS

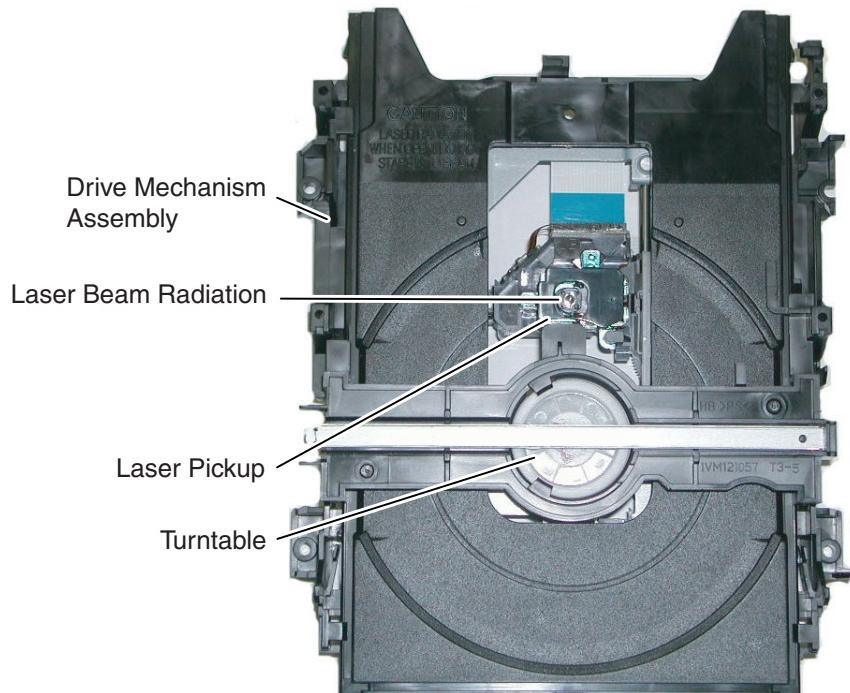
This DVD player uses a pickup that emits a laser beam.



Do not look directly at the laser beam coming from the pickup or allow it to strike against your skin.

The laser beam is emitted from the location shown in the figure. When checking the laser diode, be sure to keep your eyes at least 30 cm away from the pickup lens when the diode is turned on. Do not look directly at the laser beam.

CAUTION: Use of controls and adjustments, or doing procedures other than those specified herein, may result in hazardous radiation exposure.



CAUTION
LASER RADIATION
WHEN OPEN. DO NOT
STARE INTO BEAM.

Location: Top of DVD mechanism.

IMPORTANT SAFETY PRECAUTIONS

Product Safety Notice

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by a **▲** on schematics and in parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. The Product's Safety is under review continuously and new instructions are issued whenever appropriate. Prior to shipment from the factory, our products are carefully inspected to confirm with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

Precautions during Servicing

- A.** Parts identified by the **▲** symbol are critical for safety. Replace only with part number specified.
- B.** In addition to safety, other parts and assemblies are specified for conformance with regulations applying to spurious radiation. These must also be replaced only with specified replacements.
Examples: RF converters, RF cables, noise blocking capacitors, and noise blocking filters, etc.
- C.** Use specified internal wiring. Note especially:
 - 1) Wires covered with PVC tubing
 - 2) Double insulated wires
 - 3) High voltage leads
- D.** Use specified insulating materials for hazardous live parts. Note especially:
 - 1) Insulation tape
 - 2) PVC tubing
 - 3) Spacers
 - 4) Insulators for transistors
- E.** When replacing AC primary side components (transformers, power cord, etc.), wrap ends of wires securely about the terminals before soldering.
- F.** Observe that the wires do not contact heat producing parts (heat sinks, oxide metal film resistors, fusible resistors, etc.).
- G.** Check that replaced wires do not contact sharp edges or pointed parts.
- H.** When a power cord has been replaced, check that 5 - 6 kg of force in any direction will not loosen it.

- I.** Also check areas surrounding repaired locations.
- J.** Be careful that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

K. Crimp type wire connector

The power transformer uses crimp type connectors which connect the power cord and the primary side of the transformer. When replacing the transformer, follow these steps carefully and precisely to prevent shock hazards.

Replacement procedure

- 1) Remove the old connector by cutting the wires at a point close to the connector.
Important: Do not re-use a connector.
(Discard it.)
 - 2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.
 - 3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.
 - 4) Use a crimping tool to crimp the metal sleeve at its center. Be sure to crimp fully to the complete closure of the tool.
- L.** When connecting or disconnecting the internal connectors, first, disconnect the AC plug from the AC outlet.

Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts, and wires have been returned to their original positions. Afterwards, do the following tests and confirm the specified values to verify compliance with safety standards.

1. Clearance Distance

When replacing primary circuit components, confirm specified clearance distance (d) and (d') between soldered terminals, and between terminals and surrounding metallic parts. (See Fig. 1)

Table 1: Ratings for selected area

AC Line Voltage	Clearance Distance (d), (d')
120 V	$\geq 3.2 \text{ mm (0.126 inches)}$

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

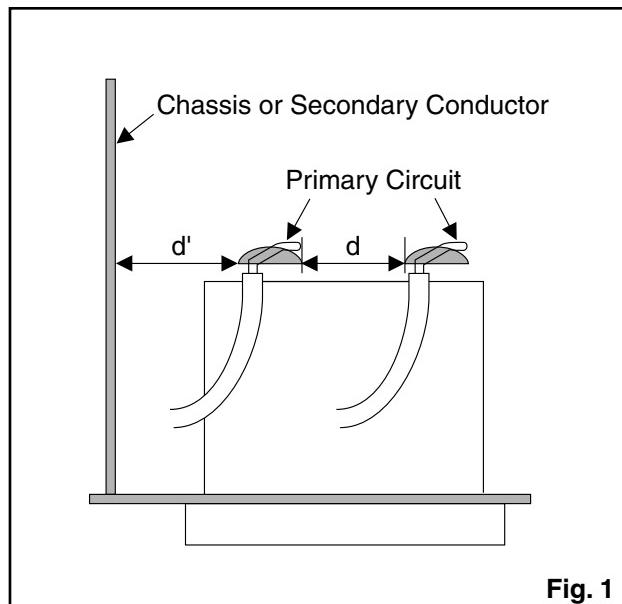


Fig. 1

2. Leakage Current Test

Confirm the specified (or lower) leakage current between B (earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.) is lower than or equal to the specified value in the table below.

Measuring Method (Power ON):

Insert load Z between B (earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across the terminals of load Z . See Fig. 2 and the following table.

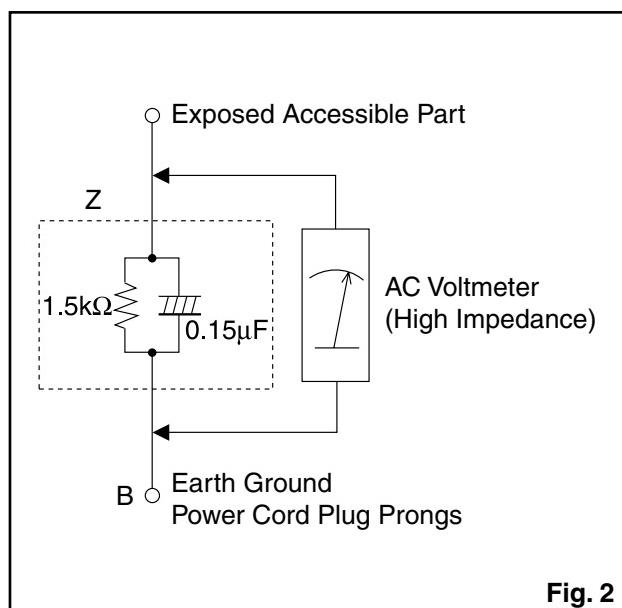


Fig. 2

Table 2: Leakage current ratings for selected areas

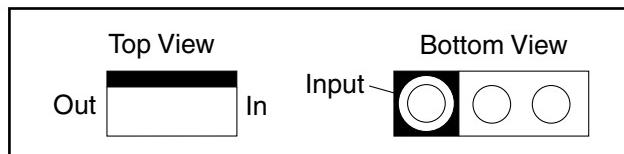
AC Line Voltage	Load Z	Leakage Current (i)	Earth Ground (B) to:
120 V	$0.15\mu\text{F}$ CAP. & $1.5\text{k}\Omega$ RES. Connected in parallel	$i \leq 0.5 \text{ mA Peak}$	Exposed accessible parts

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

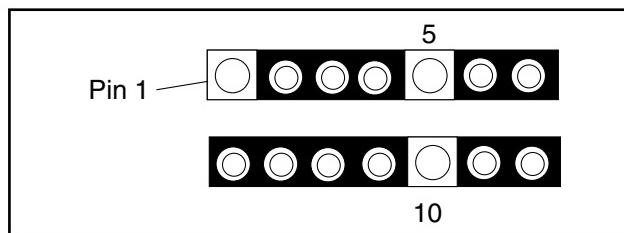
STANDARD NOTES FOR SERVICING

Circuit Board Indications

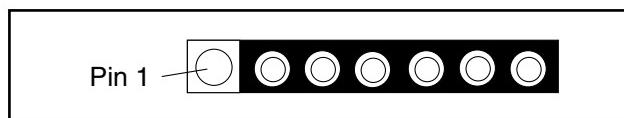
1. The output pin of the 3 pin Regulator ICs is indicated as shown.



2. For other ICs, pin 1 and every fifth pin are indicated as shown.

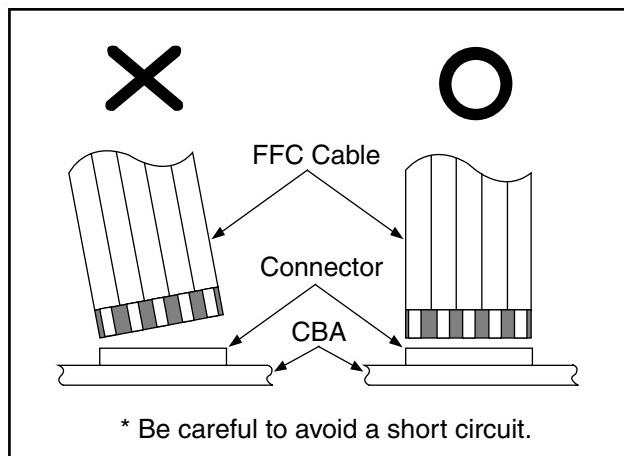


3. The 1st pin of every male connector is indicated as shown.



Instructions for Connectors

1. When you connect or disconnect the FFC (Flexible Foil Connector) cable, be sure to first disconnect the AC cord.
2. FFC (Flexible Foil Connector) cable should be inserted parallel into the connector, not at an angle.



Pb (Lead) Free Solder

When soldering, be sure to use the Pb free solder.

How to Remove / Install Flat Pack-IC

1. Removal

With Hot-Air Flat Pack-IC Desoldering Machine:

1. Prepare the hot-air flat pack-IC desoldering machine, then apply hot air to the Flat Pack-IC (about 5 to 6 seconds). (Fig. S-1-1)

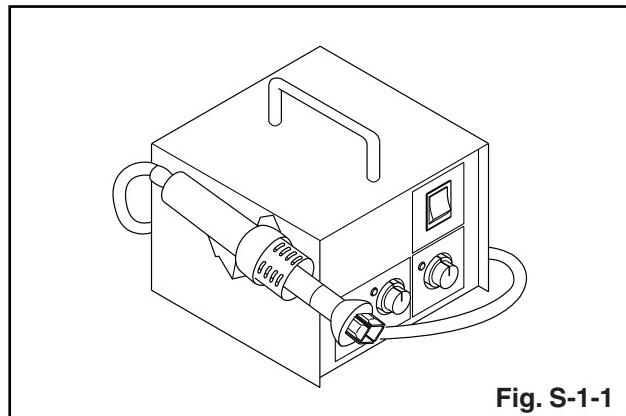


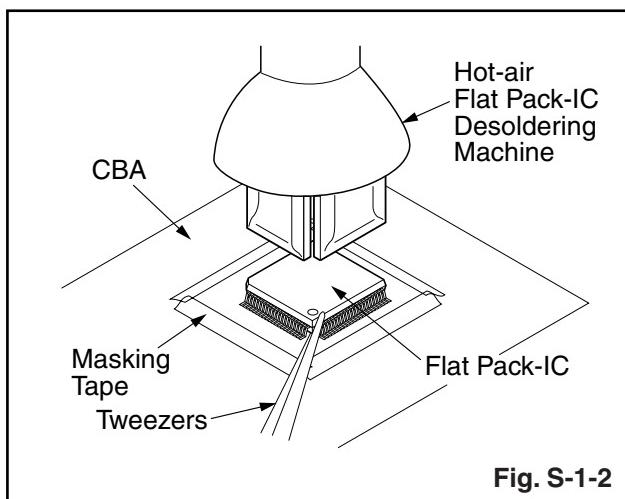
Fig. S-1-1

2. Remove the flat pack-IC with tweezers while applying the hot air.
3. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
4. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

CAUTION:

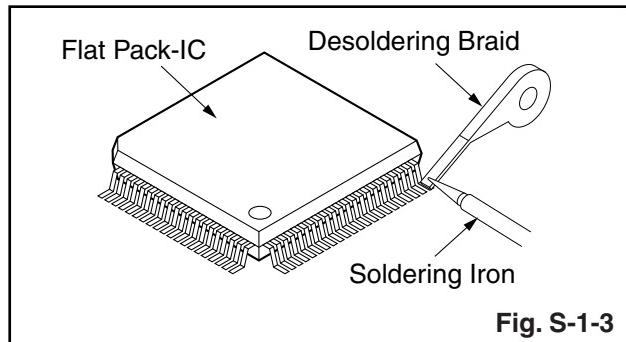
1. The Flat Pack-IC shape may differ by models. Use an appropriate hot-air flat pack-IC desoldering machine, whose shape matches that of the Flat Pack-IC.
2. Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape around the flat pack-IC to protect other parts from damage. (Fig. S-1-2)

- The flat pack-IC on the CBA is affixed with glue, so be careful not to break or damage the foil of each pin or the solder lands under the IC when removing it.

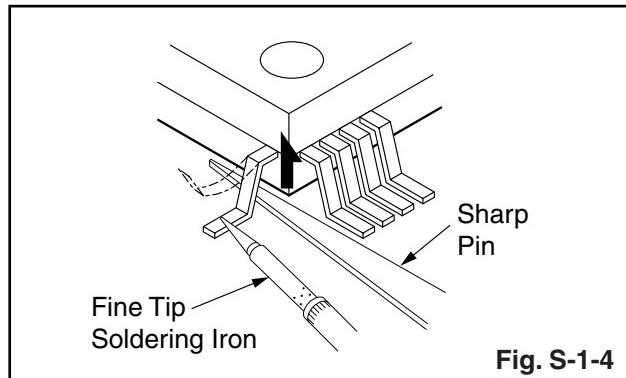


With Soldering Iron:

- Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)



- Lift each lead of the flat pack-IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air desoldering machine. (Fig. S-1-4)

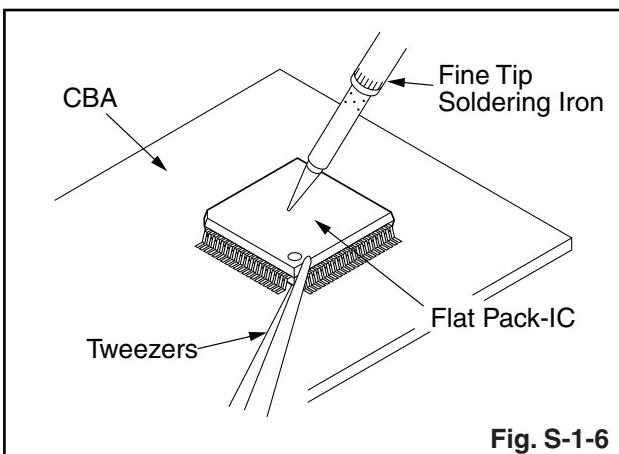
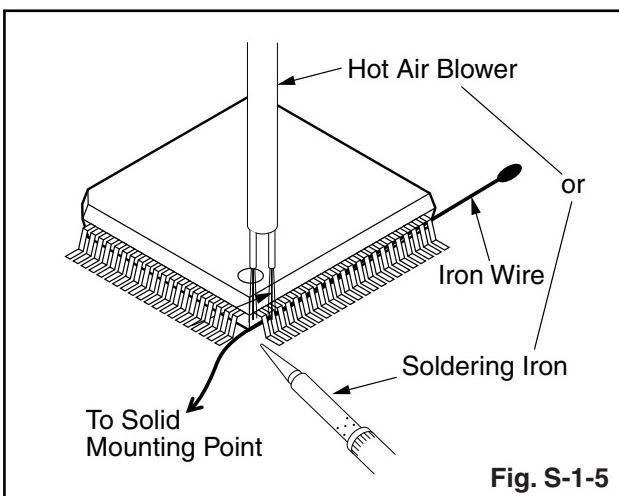


- Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
- Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

With Iron Wire:

1. Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)
2. Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.
3. While heating the pins using a fine tip soldering iron or hot air blower, pull up the wire as the solder melts so as to lift the IC leads from the CBA contact pads as shown in Fig. S-1-5.
4. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
5. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

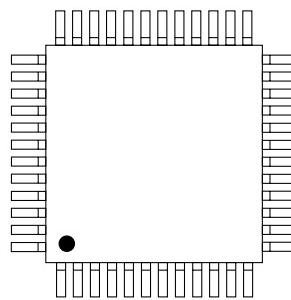
Note: When using a soldering iron, care must be taken to ensure that the flat pack-IC is not being held by glue. When the flat pack-IC is removed from the CBA, handle it gently because it may be damaged if force is applied.



2. Installation

1. Using desoldering braid, remove the solder from the foil of each pin of the flat pack-IC on the CBA so you can install a replacement flat pack-IC more easily.
2. The “●” mark on the flat pack-IC indicates pin 1. (See Fig. S-1-7.) Be sure this mark matches the 1 on the PCB when positioning for installation. Then presolder the four corners of the flat pack-IC. (See Fig. S-1-8.)
3. Solder all pins of the flat pack-IC. Be sure that none of the pins have solder bridges.

Example :



Pin 1 of the Flat Pack-IC
is indicated by a "●" mark.

Fig. S-1-7

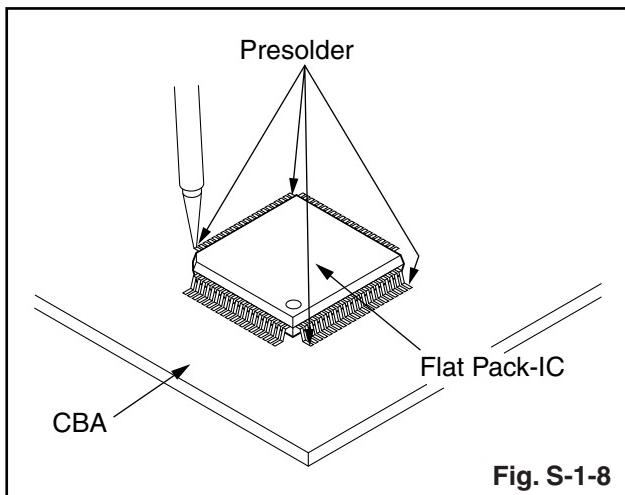


Fig. S-1-8

Instructions for Handling Semi-conductors

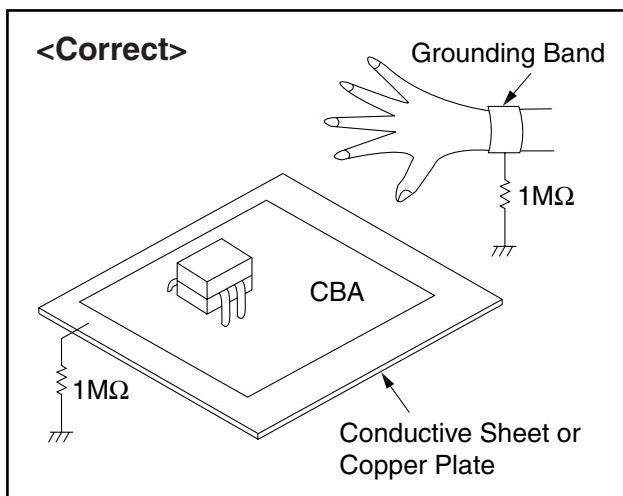
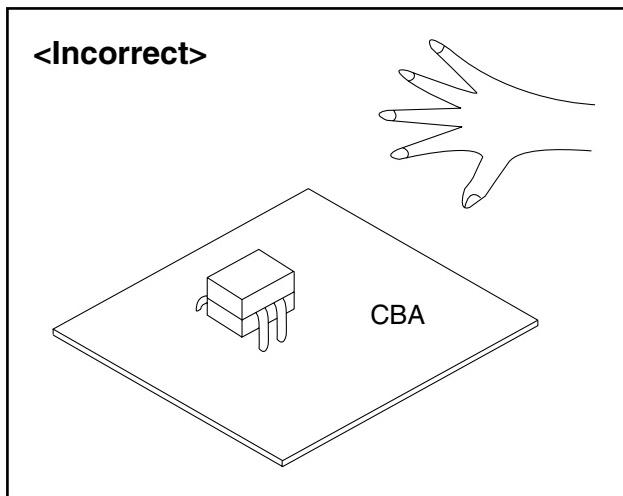
Electrostatic breakdown of the semi-conductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

1. Ground for Human Body

Be sure to wear a grounding band ($1\text{ M}\Omega$) that is properly grounded to remove any static electricity that may be charged on the body.

2. Ground for Workbench

Be sure to place a conductive sheet or copper plate with proper grounding ($1\text{ M}\Omega$) on the workbench or other surface, where the semi-conductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting semi-conductors with your clothing.



PREPARATION FOR SERVICING

How to Enter the Service Mode

About Optical Sensors

Caution:

An optical sensor system is used for the Tape Start and End Sensors on this equipment. Carefully read and follow the instructions below. Otherwise the unit may operate erratically.

What to do for preparation

Insert a tape into the Deck Mechanism Assembly and press the [PLAY] button. The tape will be loaded into the Deck Mechanism Assembly. Make sure the power is on, connect S-INH (hollow) to GND. This will stop the function of Tape Start Sensor, Tape End Sensor and Reel Sensors. (If these TPs are connected before plugging in the unit, the function of the sensors will stay valid.) See Fig. 1.

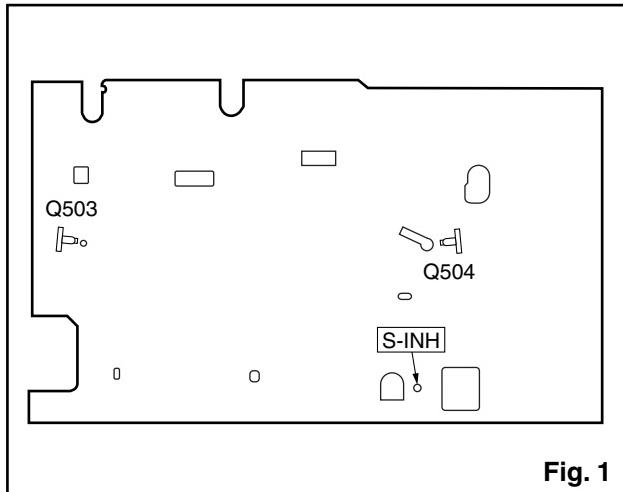


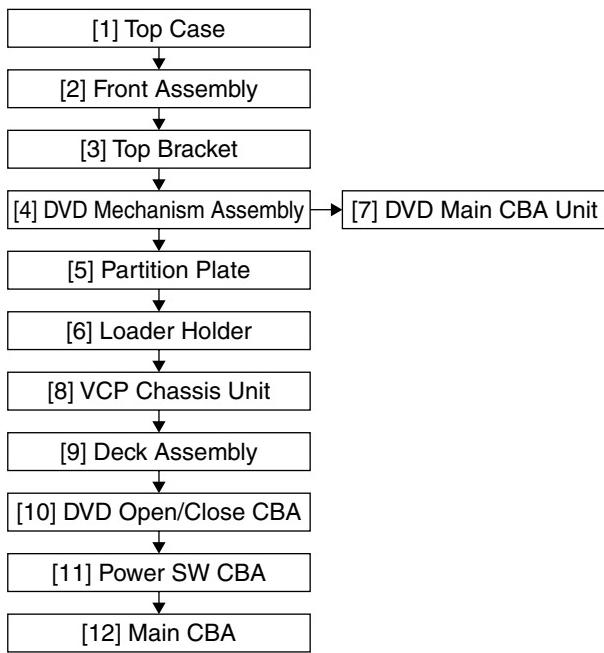
Fig. 1

Note: Because the Tape End Sensors are inactive, do not run a tape all the way to the start or the end of the tape to avoid tape damage.

CABINET DISASSEMBLY INSTRUCTIONS

1. Disassembly Flowchart

This flowchart indicates the disassembly steps to gain access to item(s) to be serviced. When reassembling, follow the steps in reverse order. Bend, route, and dress the cables as they were originally.



2. Disassembly Method

ID/ Loc. No.	Part	Removal		
		Fig. No.	Remove/*Unhook/ Unlock/Release/ Unplug/Desolder	Note
[1]	Top Case	D1	4(S-1)	---
[2]	Front Assembly	D2	*3(L-1), *3(L-2)	1
[3]	Top Bracket	D2	3(S-2)	---
[4]	DVD Mechanism Assembly	D3	4(S-3), *CN401, *CN601	---
[5]	Partition Plate	D3	2(S-4)	---
[6]	Loader Holder	D3	2(S-5)	---
[7]	DVD Main CBA Unit	D4	2(S-6), *CN201, *CN301	2, 3
[8]	VCP Chassis Unit	D5	5(S-7), 2(S-8)	---
[9]	Deck Assembly	D6	*Desolder, (S-9), (S-10), (S-11)	4, 5

ID/ Loc. No.	Part	Removal		
		Fig. No.	Remove/*Unhook/ Unlock/Release/ Unplug/Desolder	Note
[10]	DVD Open/Close CBA	D6	*Desolder	---
[11]	Power SW CBA	D6	*Desolder	---
[12]	Main CBA	D6	-----	---

↓ ↓ ↓ ↓ ↓
(1) (2) (3) (4) (5)

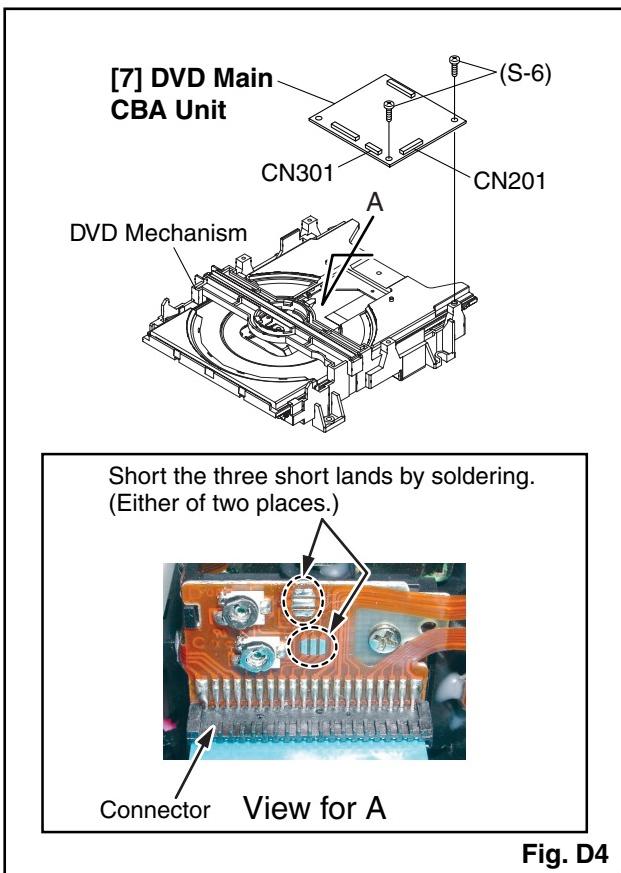
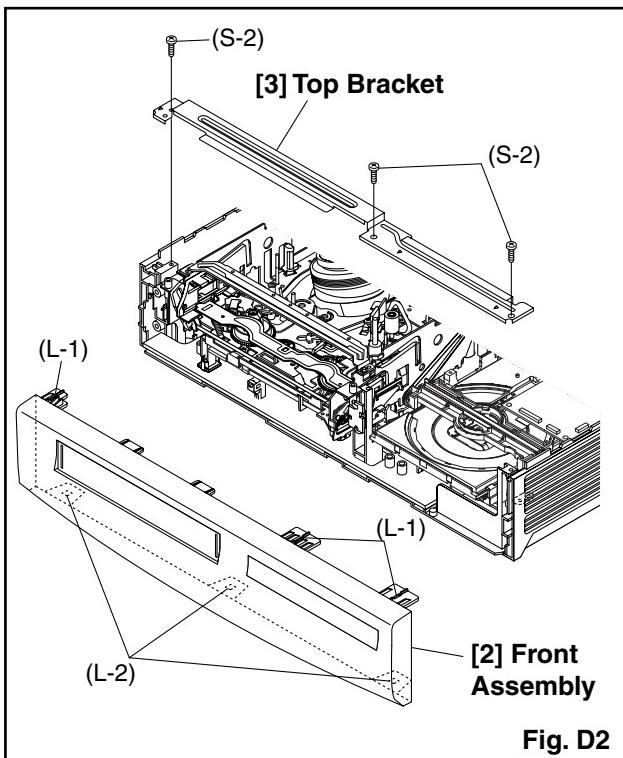
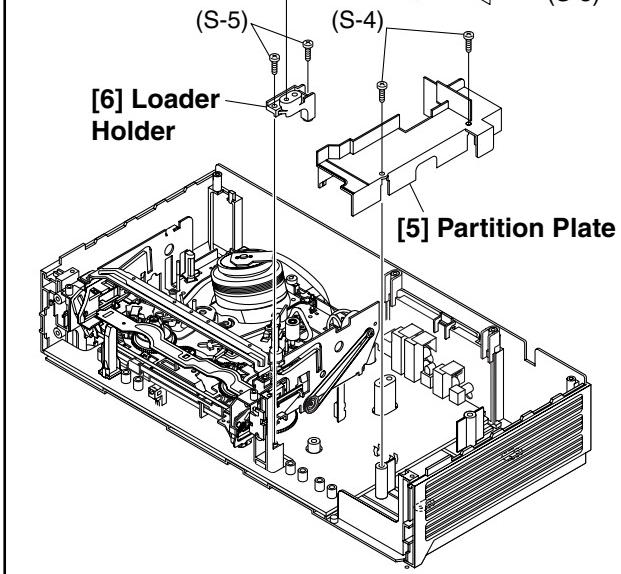
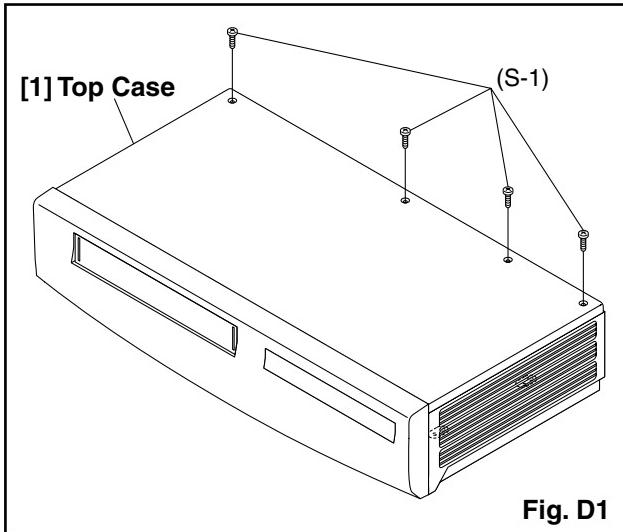
Note:

- (1) Identification (location) No. of parts in the figures
- (2) Name of the part
- (3) Figure Number for reference
- (4) Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
P = Spring, L = Locking Tab, S = Screw, CN = Connector
* = Unhook, Unlock, Release, Unplug, or Desolder
e.g. 2(S-2) = two Screws (S-2), 2(L-2) = two Locking Tabs (L-2)
- (5) Refer to "Reference Notes."

Reference Notes

- CAUTION 1:** Locking Tabs (L-1) and (L-2) are fragile. Be careful not to break them.
 - Release three Locking Tabs (L-1).
 - Release three Locking Tabs (L-2), then remove the Front Assembly.
- CAUTION 2:** Electrostatic breakdown of the laser diode in the optical system block may occur as a potential difference caused by electrostatic charge accumulated on cloth, human body etc, during unpacking or repair work.
To avoid damage of pickup follow next procedures.
 - Disconnect Connector (CN301). Remove two Screws (S-6) and lift the DVD Main CBA Unit. (Fig. D4)
 - Short the three short lands of FPC cable with solder before removing the FFC cable (CN201) from it. If you disconnect the FFC cable (CN201), the laser diode of pickup will be destroyed. (Fig. D4)
- CAUTION 3:** When reassembling, confirm the FFC cable (CN201) is connected completely. Then remove the solder from the three short lands of FPC cable. (Fig. D4)

- When reassembling, solder wire jumpers as shown in Fig. D6.
- Before installing the Deck Assembly, be sure to place the pin of LD-SW on Main CBA as shown in Fig. D6. Then, install the Deck Assembly while aligning the hole of Cam Gear with the pin of LD-SW, the shaft of Cam Gear with the hole of LD-SW as shown in Fig. D6.



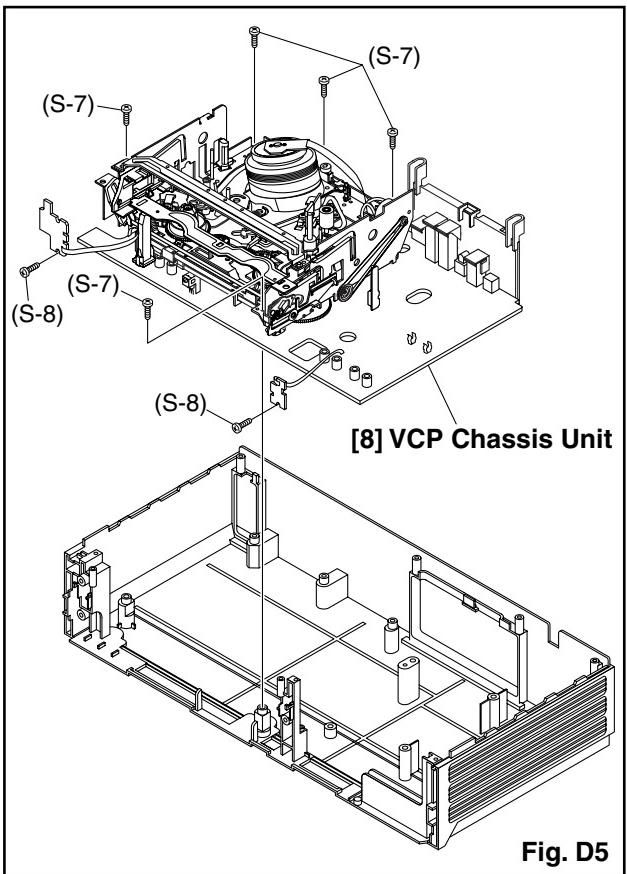


Fig. D5

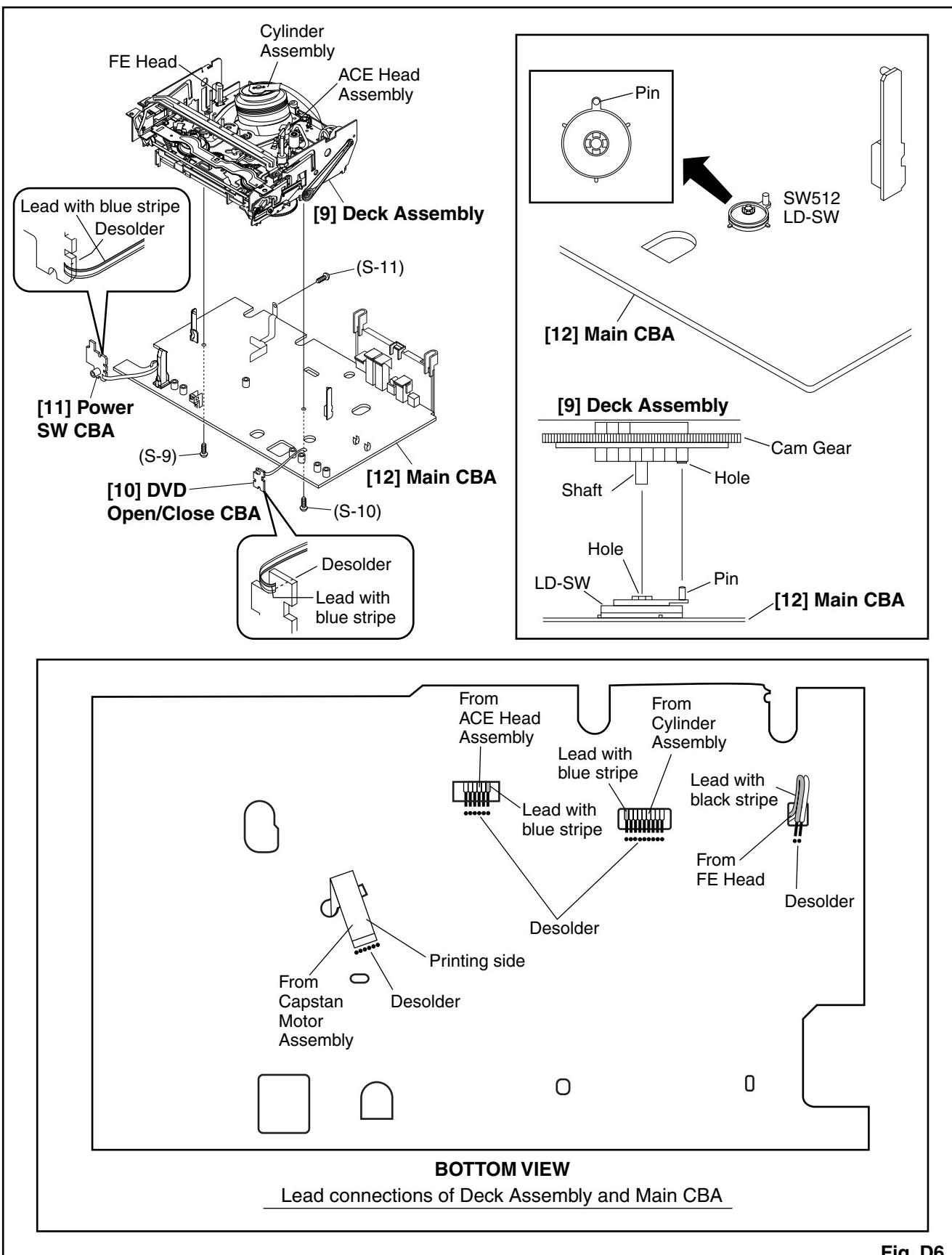
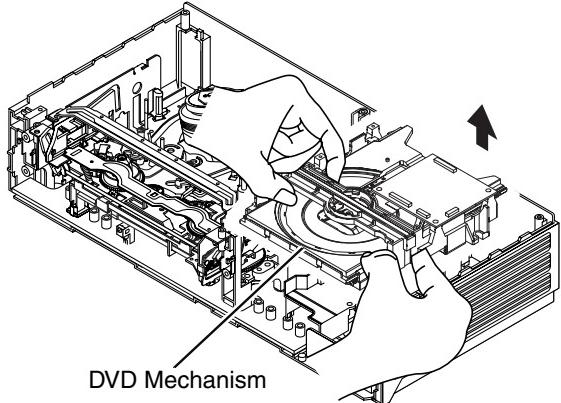


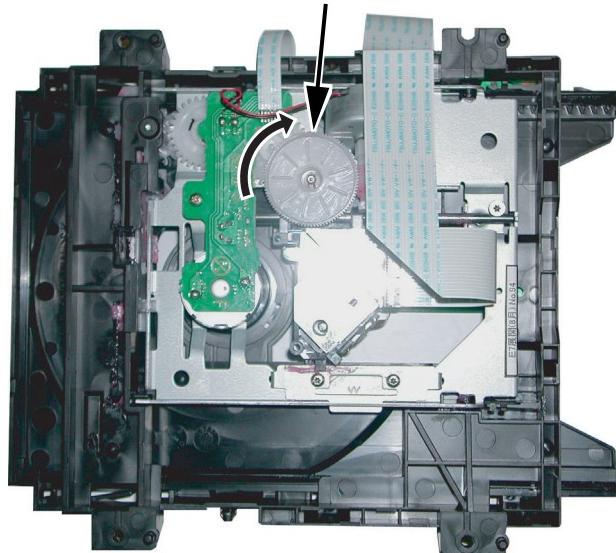
Fig. D6

3. HOW TO EJECT MANUALLY

1. Remove the Top Case, Front Assembly and Top Bracket.
2. Remove four Screws (S-3) in Fig. D3. Do not disconnect connectors.
3. While lifting up the DVD Mechanism, rotate the roulette in the direction of the arrow as shown below.
4. Pull the tray slowly manually.



The gear is turned to the direction of the arrow.



ELECTRICAL ADJUSTMENT INSTRUCTIONS

General Note: "CBA" is abbreviation for "Circuit Board Assembly."

NOTE:

1. Electrical adjustments are required after replacing circuit components and certain mechanical parts. It is important to do these adjustments only after all repairs and replacements have been completed. Also, do not attempt these adjustments unless the proper equipment is available.
2. To perform these alignment / confirmation procedures, make sure that the tracking control is set in the center position: Press either [TRACKING ▼] or [TRACKING ▲] button on the remote control unit first, then the [PLAY] button on the front panel.

Test Equipment Required

1. Oscilloscope: Dual-trace with 10:1 probe, V-Range: 0.001~50 V/Div., F-Range: DC~AC-20 MHz
2. Alignment Tape (FL8A)

Head Switching Position Adjustment

Purpose: To determine the Head Switching position during playback.

Symptom of Misadjustment: May cause Head Switching noise or vertical jitter in the picture.

Test point	Adj. Point	Mode	Input
TP751(V-OUT) TP302(RF-SW) GND	VR501 (Switching Point)	PLAY (SP)	-----
Tape	Measurement Equipment	Spec.	
FL8A	Oscilloscope	$6.5H \pm 1H$ ($412.7\mu s \pm 63.5\mu s$)	

Connections of Measurement Equipment

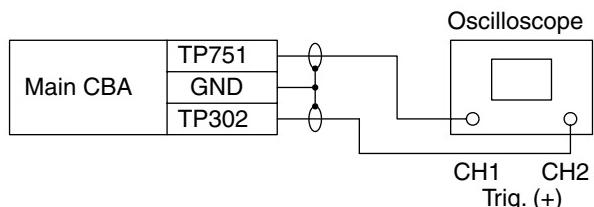
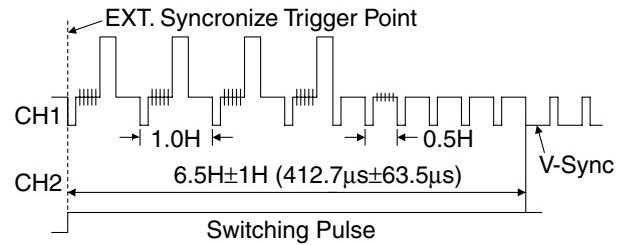


Figure 1



Note: TP751(V-OUT), TP302(RF-SW), VR501(Switching Point) --- Main CBA

Reference Notes:

Playback the Alignment tape and adjust VR501 so that the V-sync front edge of the CH1 video output waveform is at the $6.5H \pm 1H$ ($412.7 \mu s \pm 63.5 \mu s$) delayed position from the rising edge of the CH2 head switching pulse waveform.

HOW TO INITIALIZE THE DVD PLAYER & VCP

To put the program back at the factory-default, initialize the DVD player & VCP as the following procedure.

< DVD Section >

1. Press [DVD], [1], [2], [3], [4], and [DISPLAY] buttons on the remote control unit in that order.
Fig. a appears on the screen.

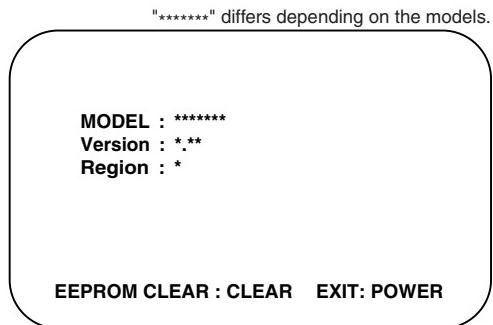


Fig. a

2. Press [CLEAR/C.RESET] button on the remote control unit.
Fig. b appears on the screen.

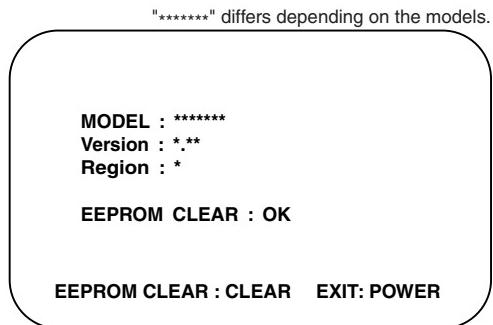


Fig. b

When "OK" appears on the screen, the factory default will be set.

3. To exit this mode, press [STANDBY-ON] button.

FIRMWARE RENEWAL MODE

- Turn the power on and remove the disc on the tray.
- To put the DVD player into version up mode, press [DVD], [9], [8], [7], [6], and [SEARCH MODE] buttons on the remote control unit in that order. The tray will open automatically.

Fig. a appears on the screen.

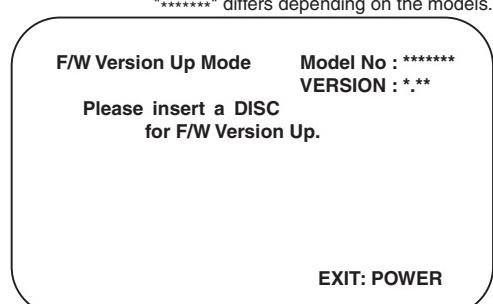


Fig. a Version Up Mode Screen

The DVD player can also enter the version up mode with the tray open. In this case, Fig. a will be shown on the screen while the tray is open.

- Load the disc for version up.
- The DVD player enters the F/W version up mode automatically. Fig. c appears on the screen. If you enter the F/W for different models, "Disc Error" will appear on the screen, then the tray will open automatically.

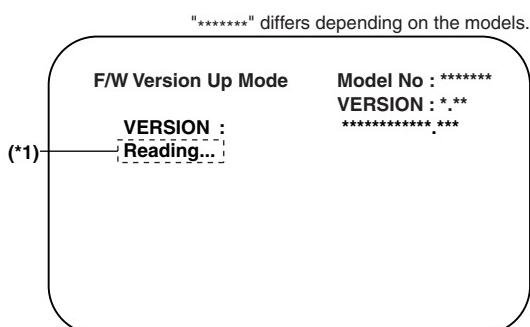


Fig. c Programming Mode Screen

The appearance shown in (*)1 of Fig. c is described as follows:

No.	Appearance	State
1	Reading...	Sending files into the memory
2	Erasing...	Erasing previous version data
3	Programming...	Writing new version data

- After programming is finished, the tray opens automatically. Fig. e appears on the screen.

"*****" differs depending on the models.

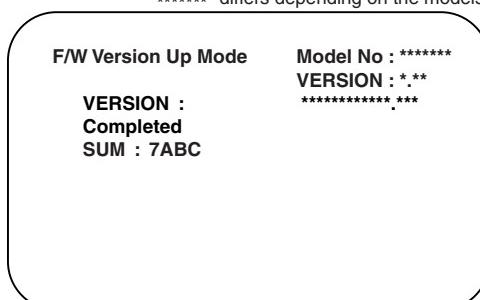


Fig. e Completed Program Mode Screen

At this time, no button is available.

- Remove the disc on the tray.
- Unplug the AC cord from the AC outlet. Then plug it again.
- Turn the power on by pressing the [STANDBY-ON] button and the tray will close.
- Press [1], [2], [3], [4], and [DISPLAY] buttons on the remote control unit in that order.

Fig. g appears on the screen.

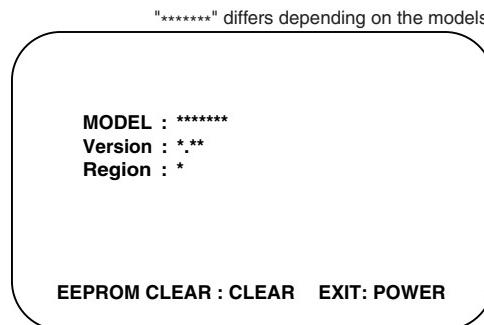


Fig. g

- Press [CLEAR/C.RESET] button on the remote control unit.

Fig. h appears on the screen.

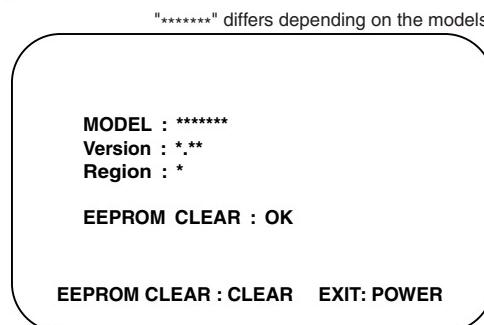


Fig. h

When "OK" appears on the screen, the factory default will be set. Then the firmware renewal mode is complete.

- To exit this mode, press [STANDBY-ON] button.

FUNCTION INDICATOR SYMBOLS

Note: If a mechanical malfunction occurs, the power is turned off. When the power comes on again after that by pressing [STANDBY-ON] button, an error message is displayed on the TV screen for 5 seconds.

Cause	Indicator Active
When reel or capstan mechanism is not functioning correctly	“EJECT ▲ R” is displayed on a TV screen. (Refer to Fig. 1.)
When tape loading mechanism is not functioning correctly	“EJECT ▲ T” is displayed on a TV screen. (Refer to Fig. 2.)
When cassette loading mechanism is not functioning correctly	“EJECT ▲ C” is displayed on a TV screen. (Refer to Fig. 3.)
When the drum is not working properly	“EJECT ▲ D” is displayed on a TV screen. (Refer to Fig. 4.)
P-ON+5V Power safety detection	“EJECT ▲ P” is displayed on a TV screen. (Refer to Fig. 5.)

TV screen

When reel or capstan mechanism is not functioning correctly

EJECT ▲ R

When the drum is not working properly

EJECT ▲ D

When tape loading mechanism is not functioning correctly

EJECT ▲ T

P-ON+5V Power safety detection

EJECT ▲ P

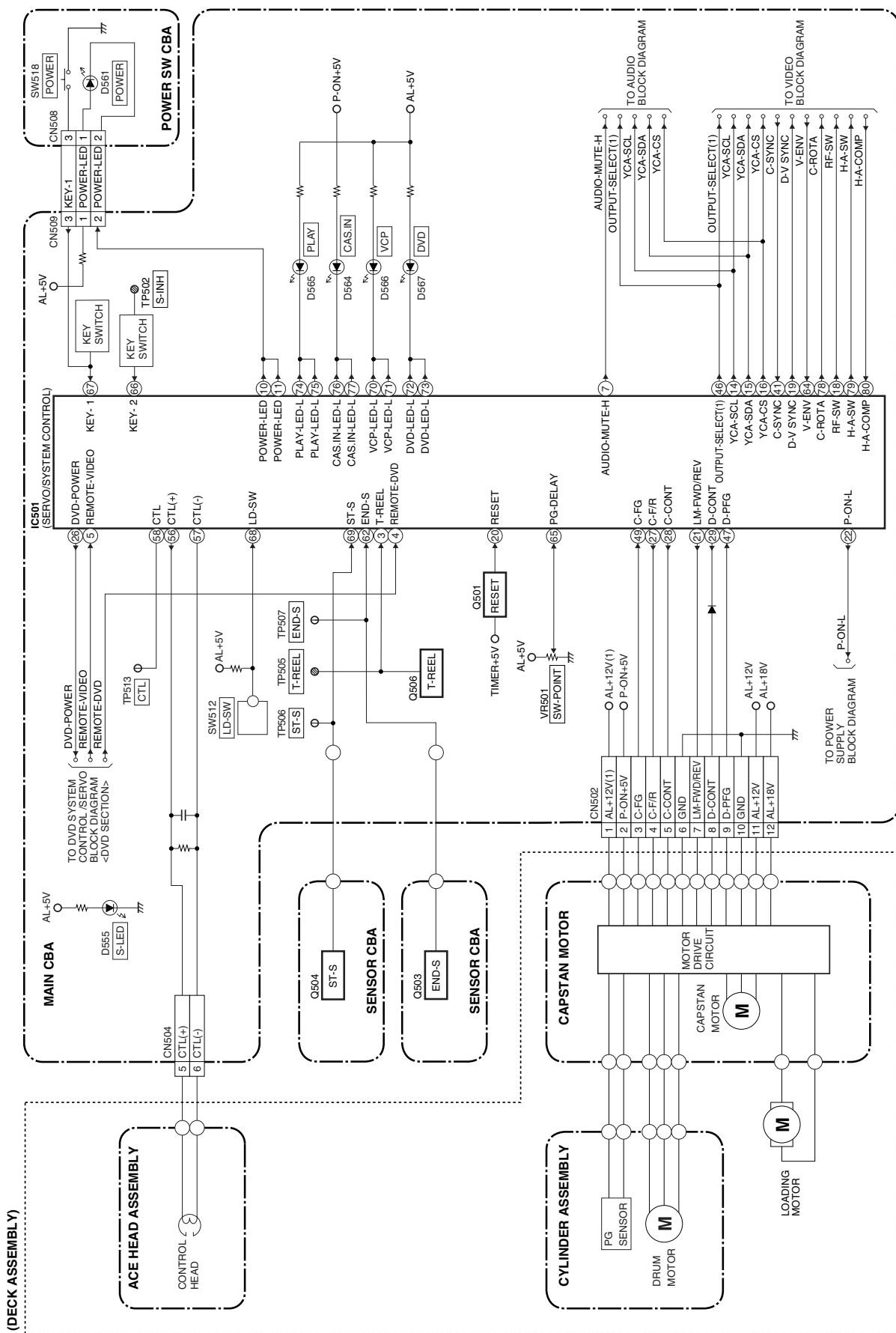
When tape loading mechanism is not functioning correctly

EJECT ▲ C

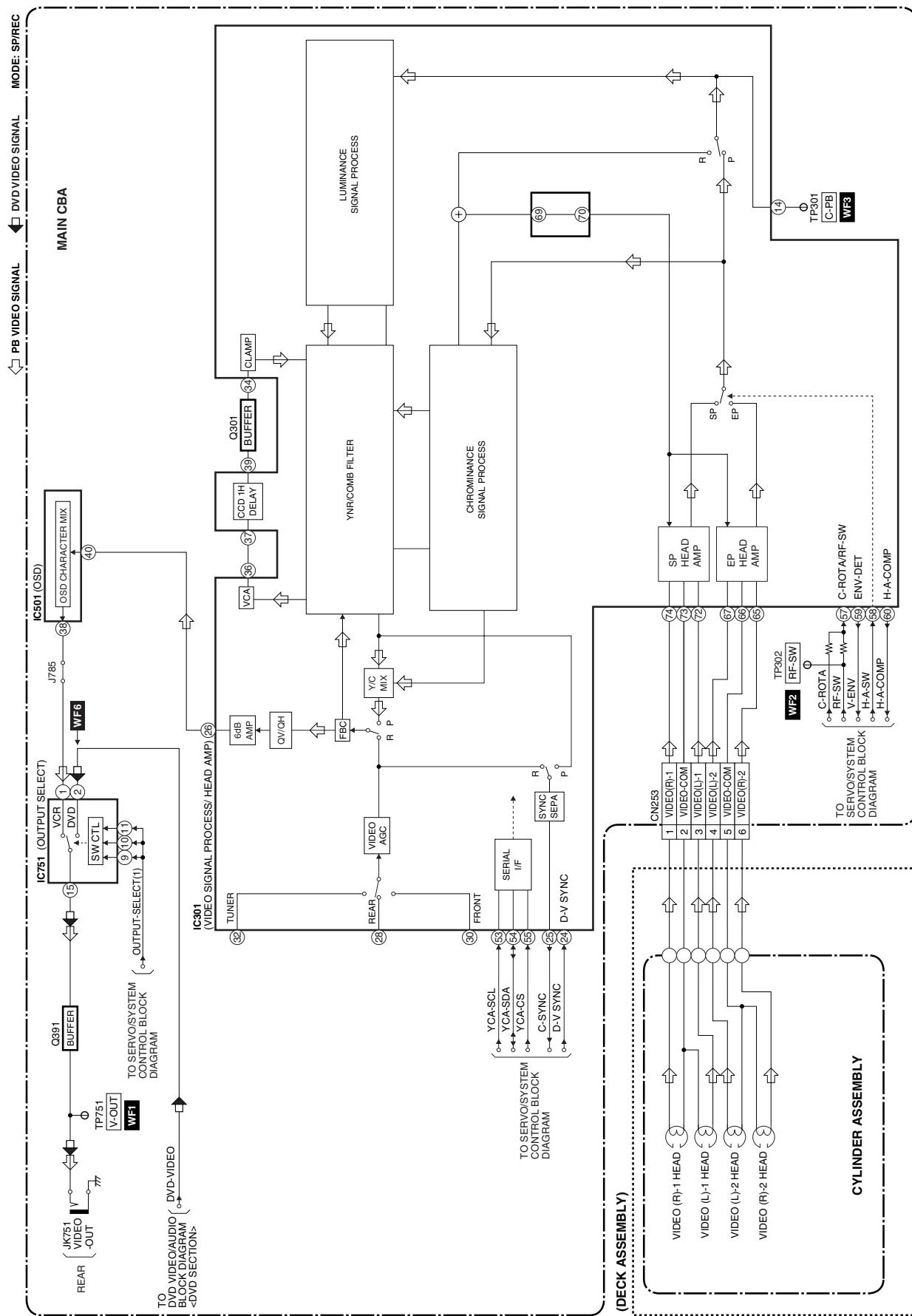
Fig. 3

BLOCK DIAGRAMS <VCP SECTION>

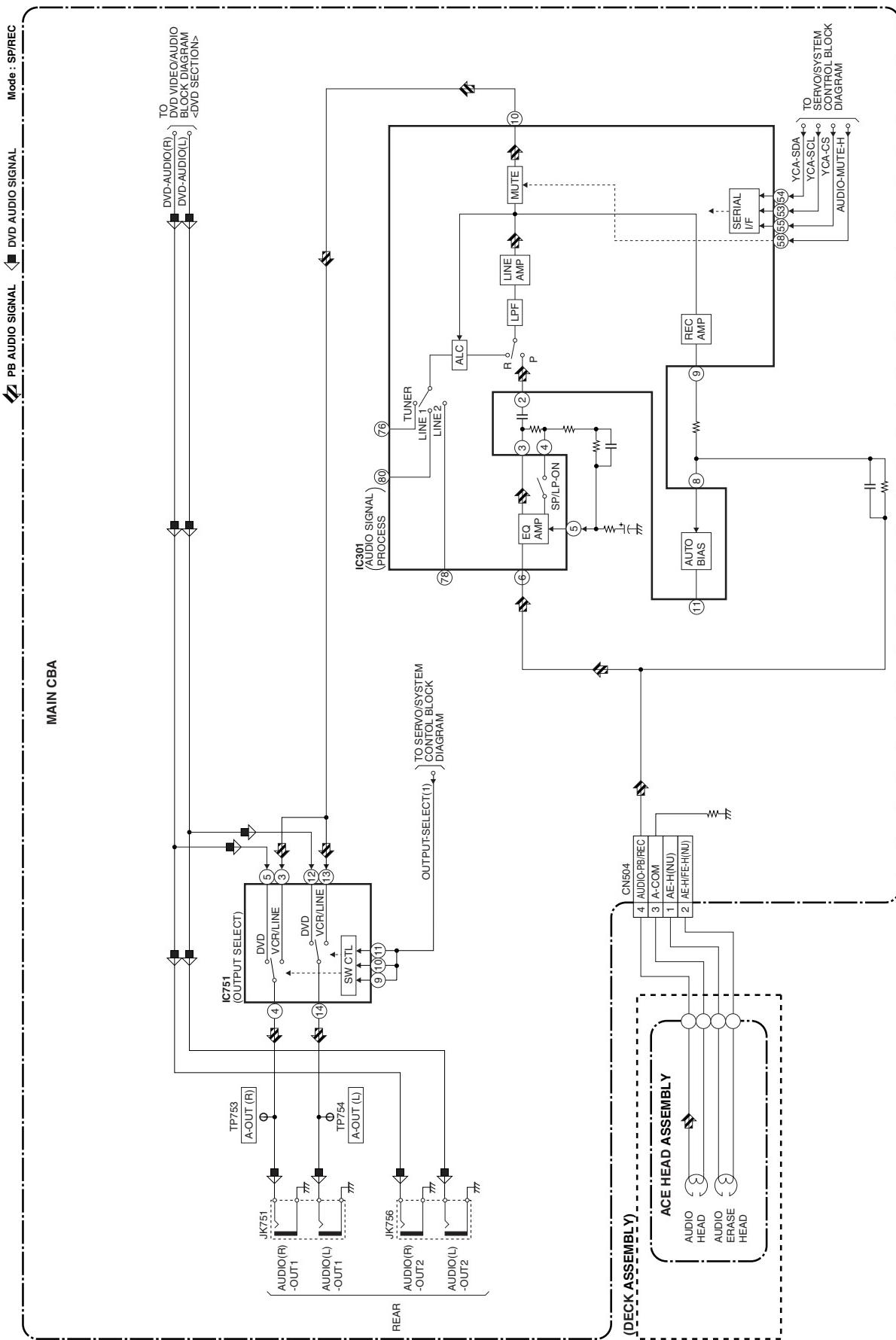
Servo / System Control Block Diagram



Video Block Diagram



Audio Block Diagram

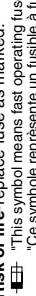


Power Supply Block Diagram

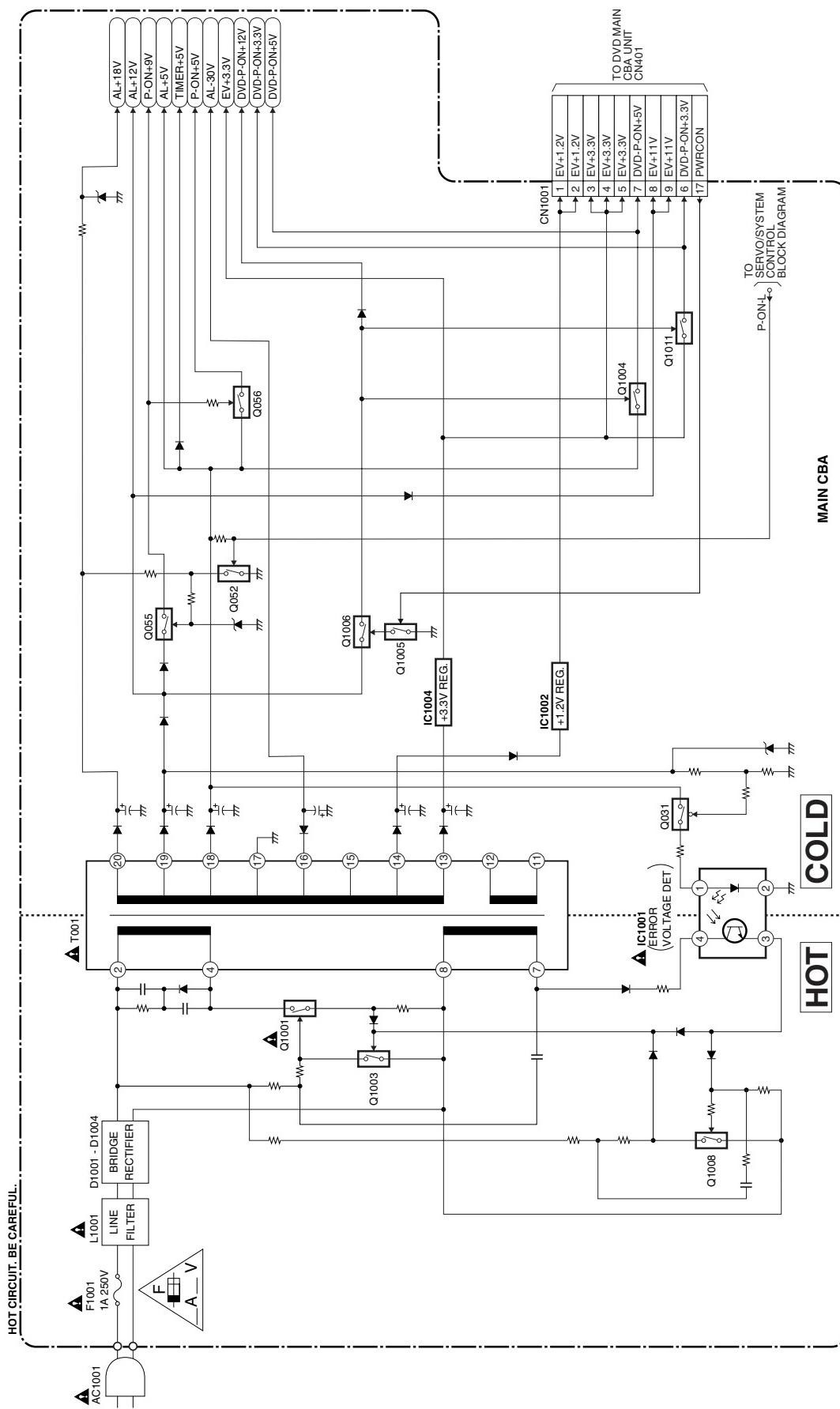
CAUTION!

 Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
 If Main Fuse (F1001) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power circuit to fail. Otherwise, it may cause some components in the power supply circuit to fail.

CAUTION!

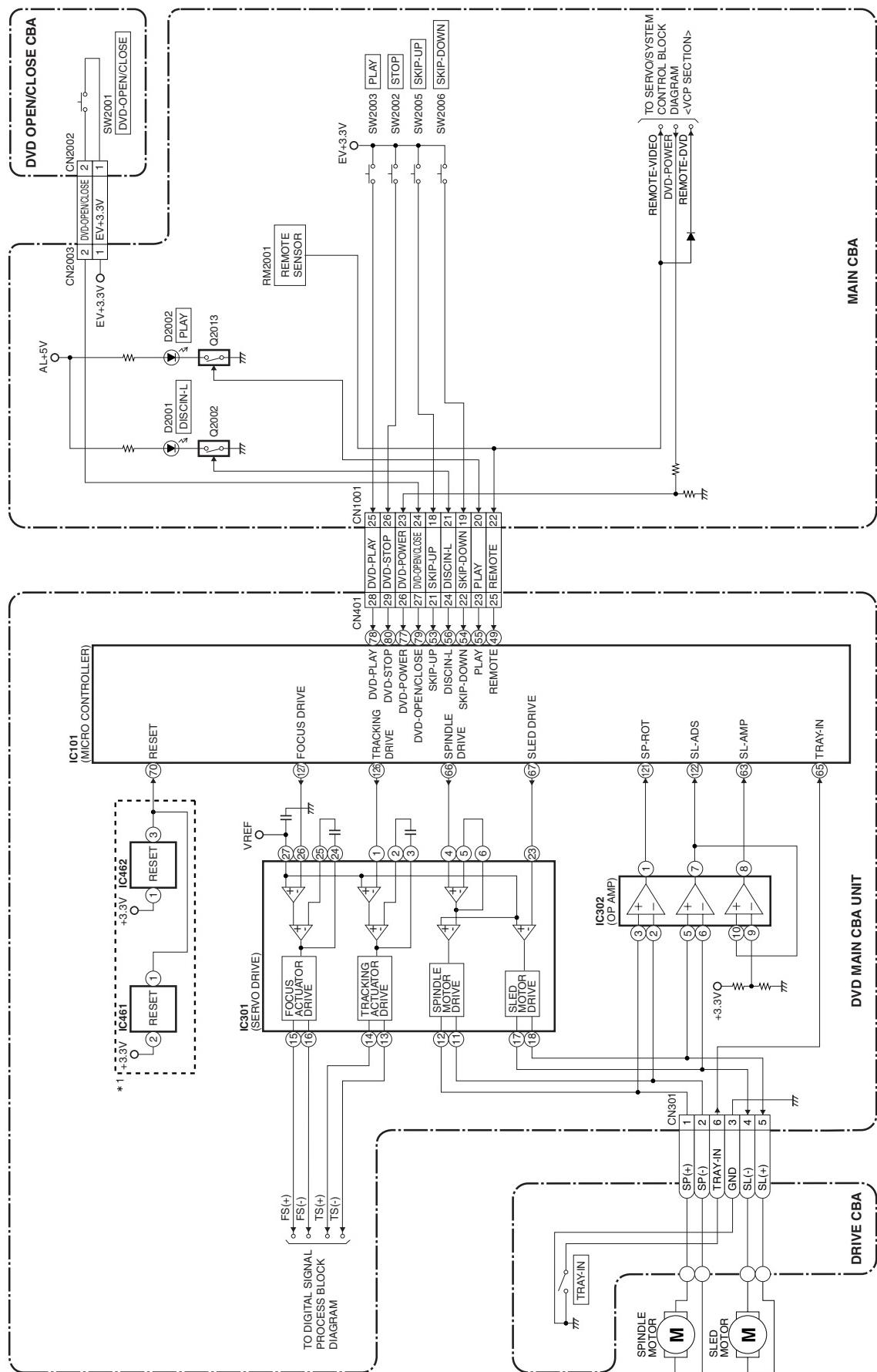
 For continued protection against fire hazard,
 replace only with the same type fuse.
ATTENTION : Pour une protection continue contre les risques d'incendie n'utiliser que des fusibles de même type.
Risk of fire - replace fuse as marked.

 "This symbol means fast operating fuse."
 "Ce symbole représente un fusible à fusion rapide."

NOTE:
 The voltage for parts in hot circuit is measured using
 hot GND as a common terminal.

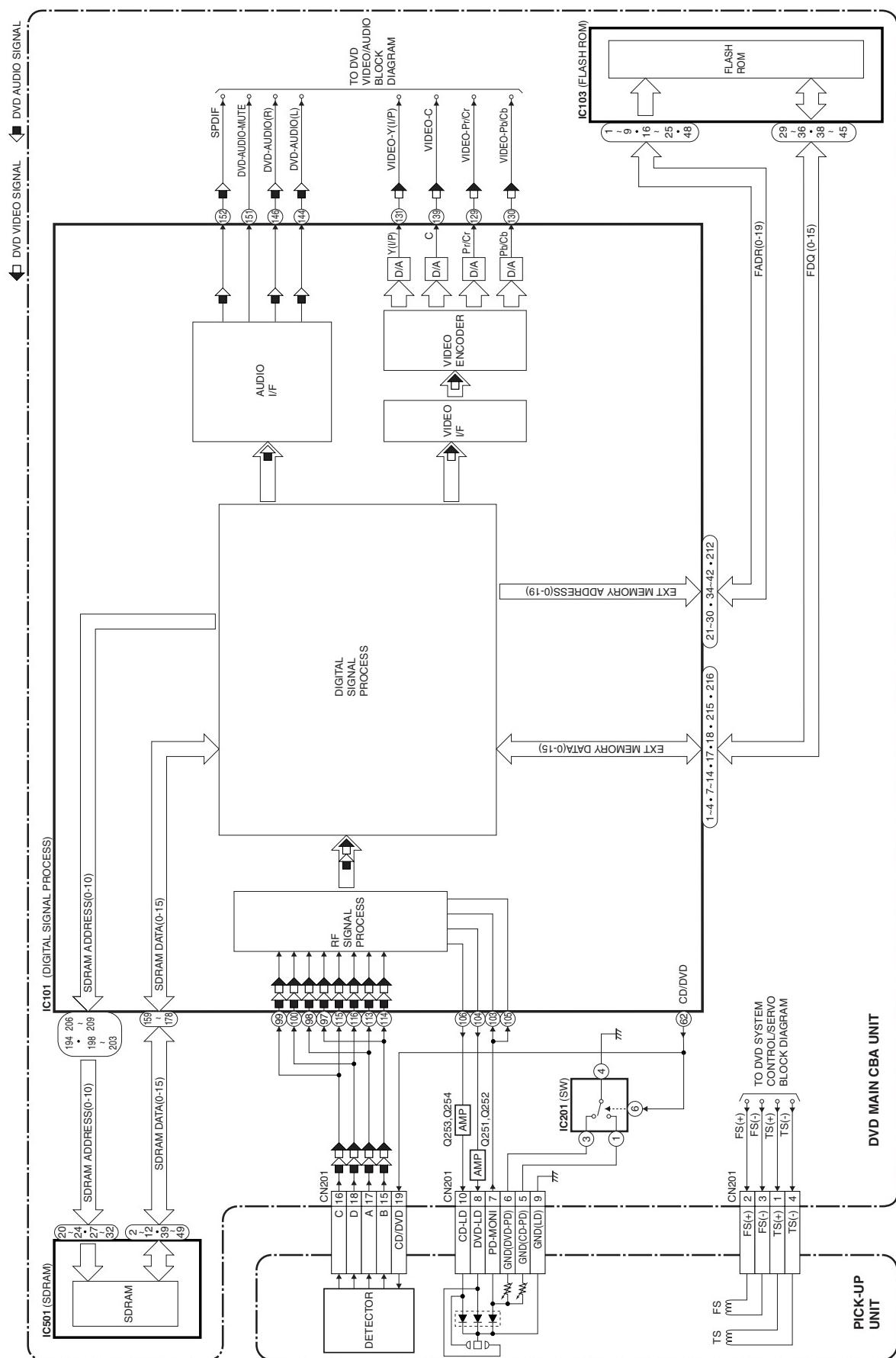


BLOCK DIAGRAMS <DVD SECTION>

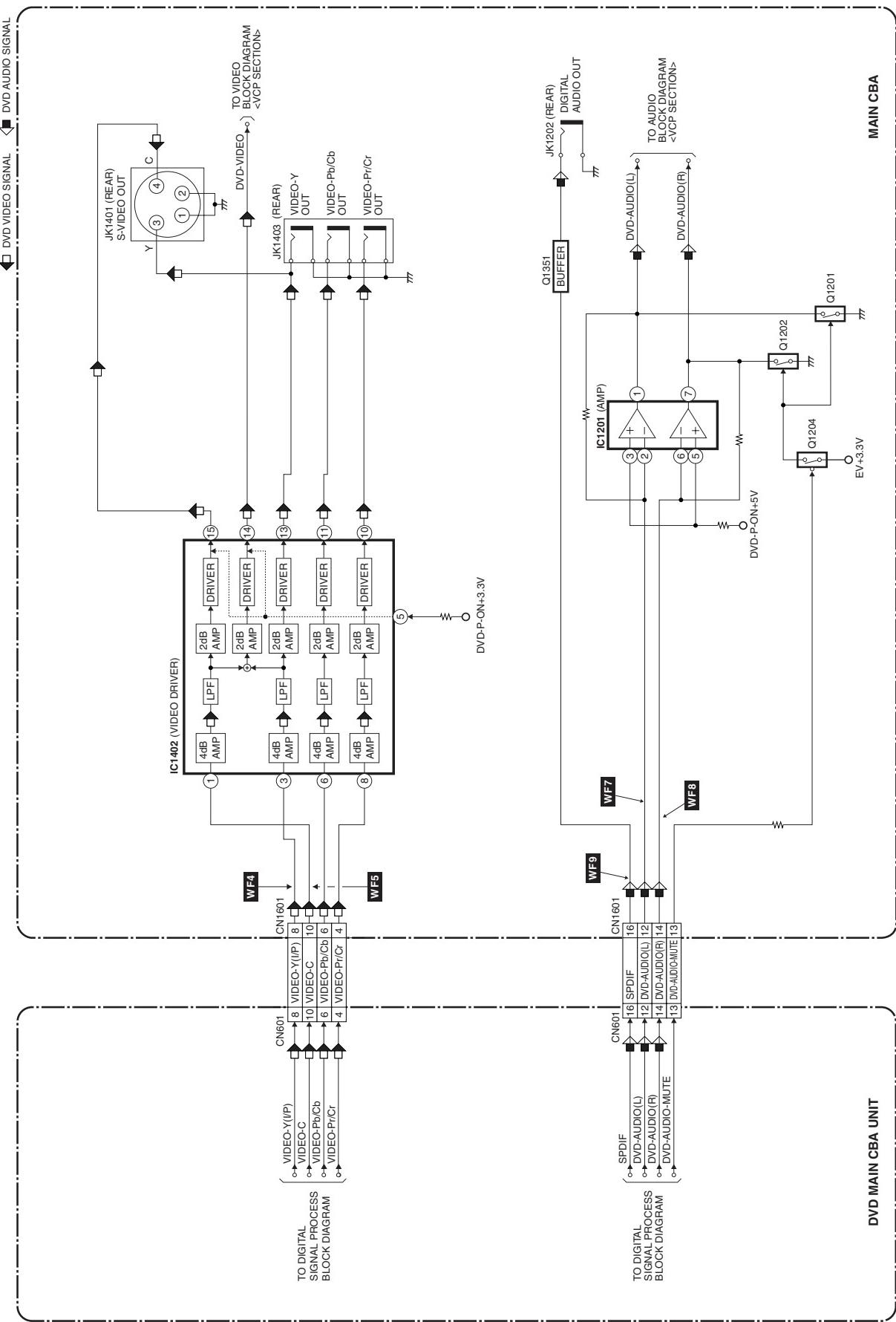
DVD System Control / Servo Block Diagram



Digital Signal Process Block Diagram



DVD Video / Audio Block Diagram



SCHEMATIC DIAGRAMS / CBA'S AND TEST POINTS

Standard Notes

WARNING

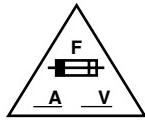
Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark "▲" in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

Notes:

1. Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.
2. All resistance values are indicated in ohms ($K = 10^3$, $M = 10^6$).
3. Resistor wattages are 1/4W or 1/6W unless otherwise specified.
4. All capacitance values are indicated in μF ($P = 10^{-6} \mu F$).
5. All voltages are DC voltages unless otherwise specified.

LIST OF CAUTION, NOTES, AND SYMBOLS USED IN THE SCHEMATIC DIAGRAMS ON THE FOLLOWING PAGES:

1. CAUTION:



FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE.

ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES D'INCENDIE N'UTILISER QUE DES FUSIBLES DE MÊME TYPE.

RISK OF FIRE-REPLACE FUSE AS MARKED.



This symbol means fast operating fuse.

Ce symbole représente un fusible à fusion rapide.

2. CAUTION:

Fixed Voltage (or Auto voltage selectable) power supply circuit is used in this unit.

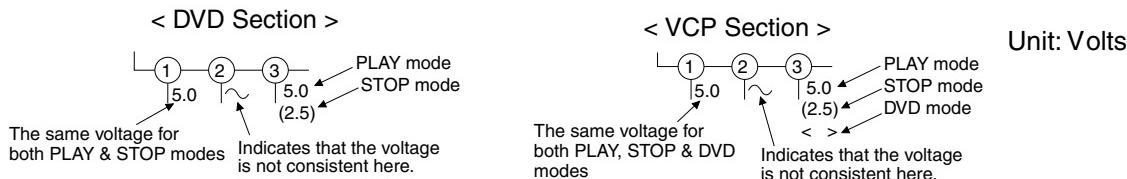
If Main Fuse (F1001) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

3. Note:

1. Do not use the part number shown on the drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since the drawings were prepared.
2. To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

4. Mode: SP

5. Voltage indications for PLAY and STOP modes on the schematics are as shown below:

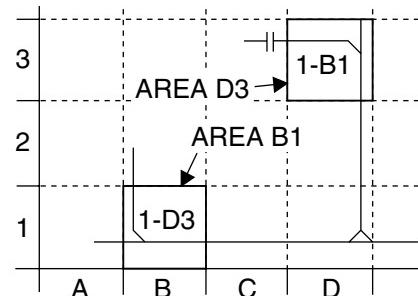


6. How to read converged lines

1-D3
↑
Distinction Area
Line Number
(1 to 3 digits)

Examples:

1. "1-D3" means that line number "1" goes to the line number "1" of the area "D3".
2. "1-B1" means that line number "1" goes to the line number "1" of the area "B1".



7. Test Point Information

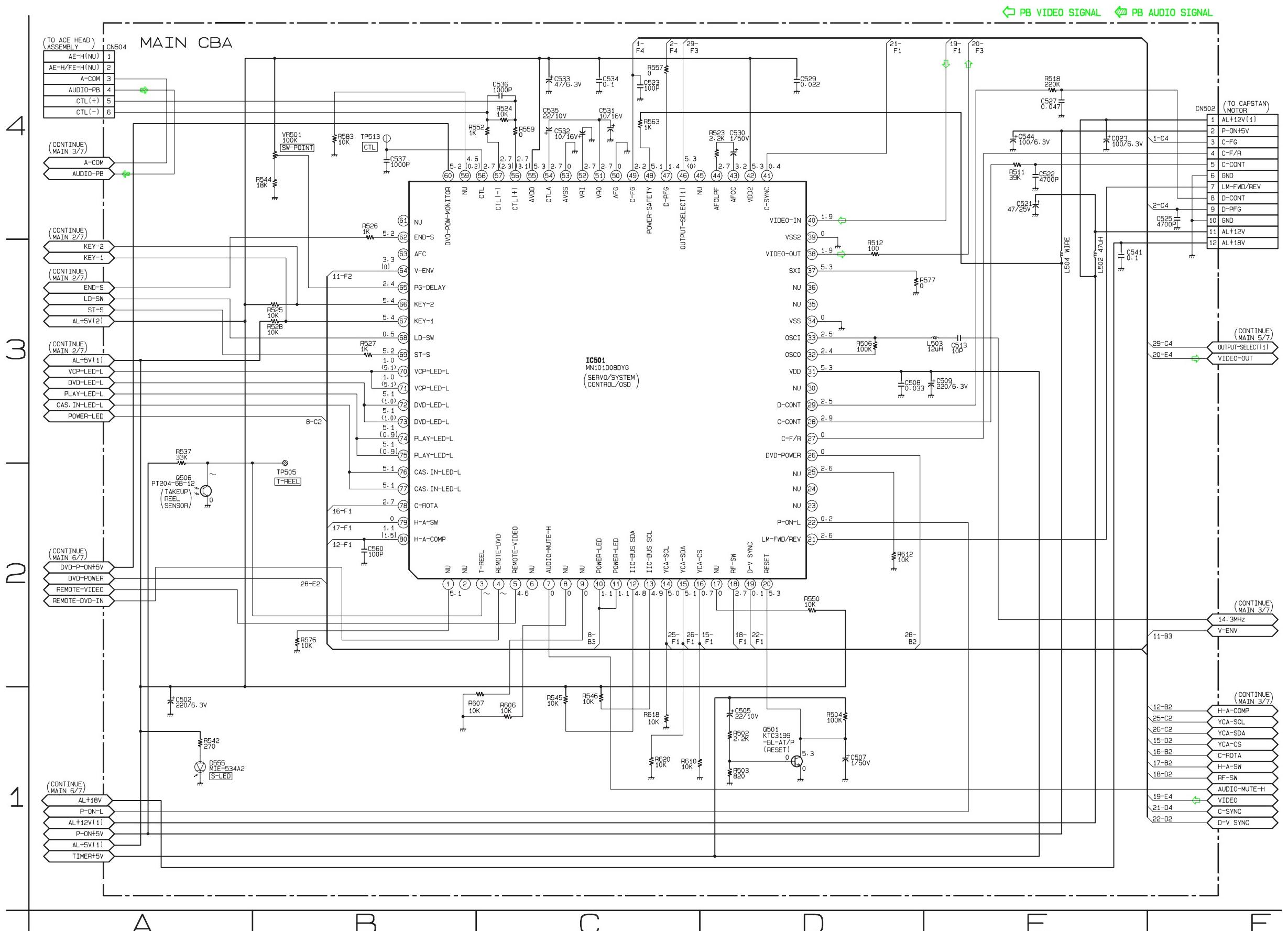
: Indicates a test point with a jumper wire across a hole in the PCB.

: Used to indicate a test point with a component lead on foil side.

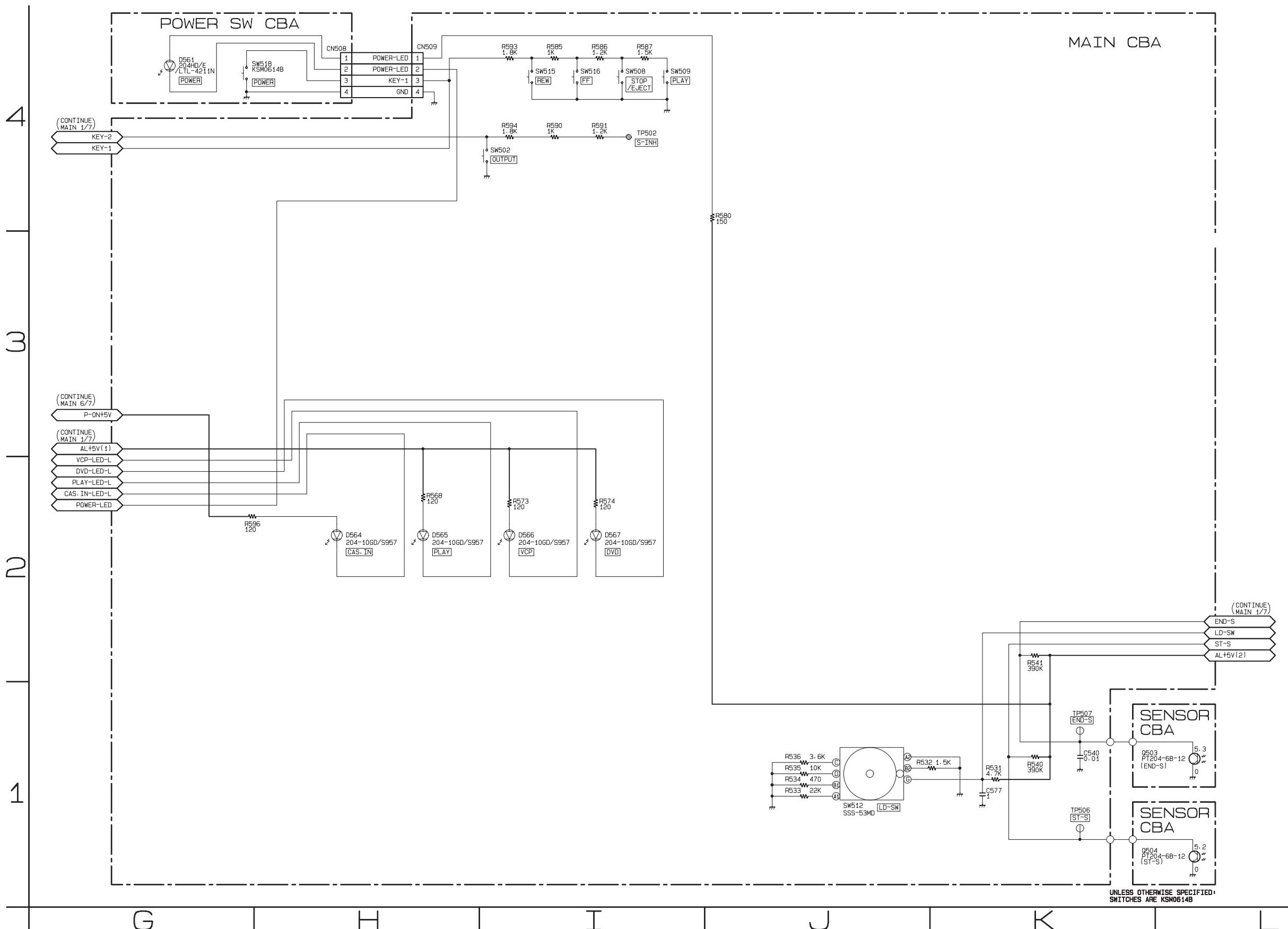
: Used to indicate a test point with no test pin.

: Used to indicate a test point with a test pin.

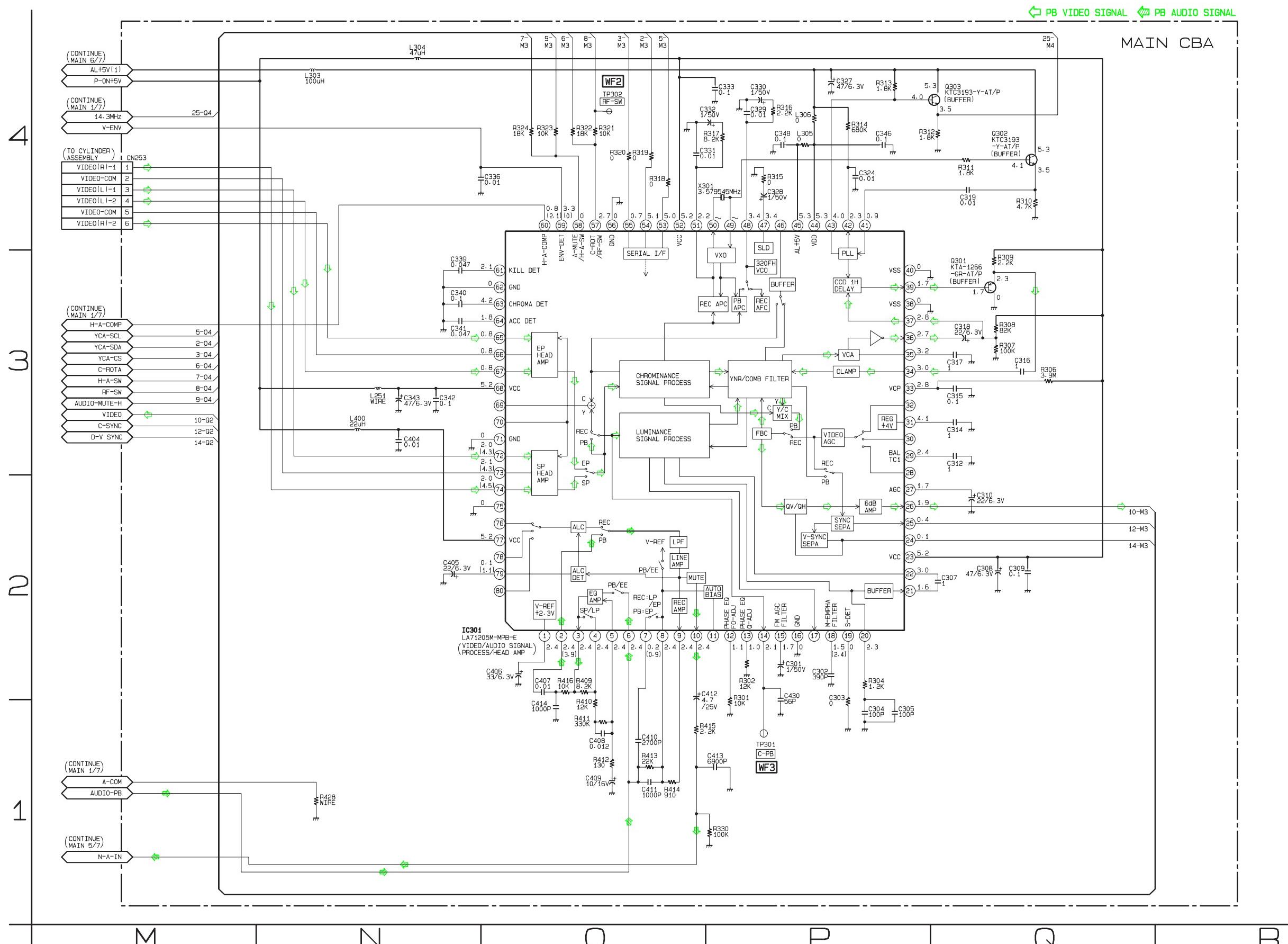
Main 1/7 Schematic Diagram < VCP Section >



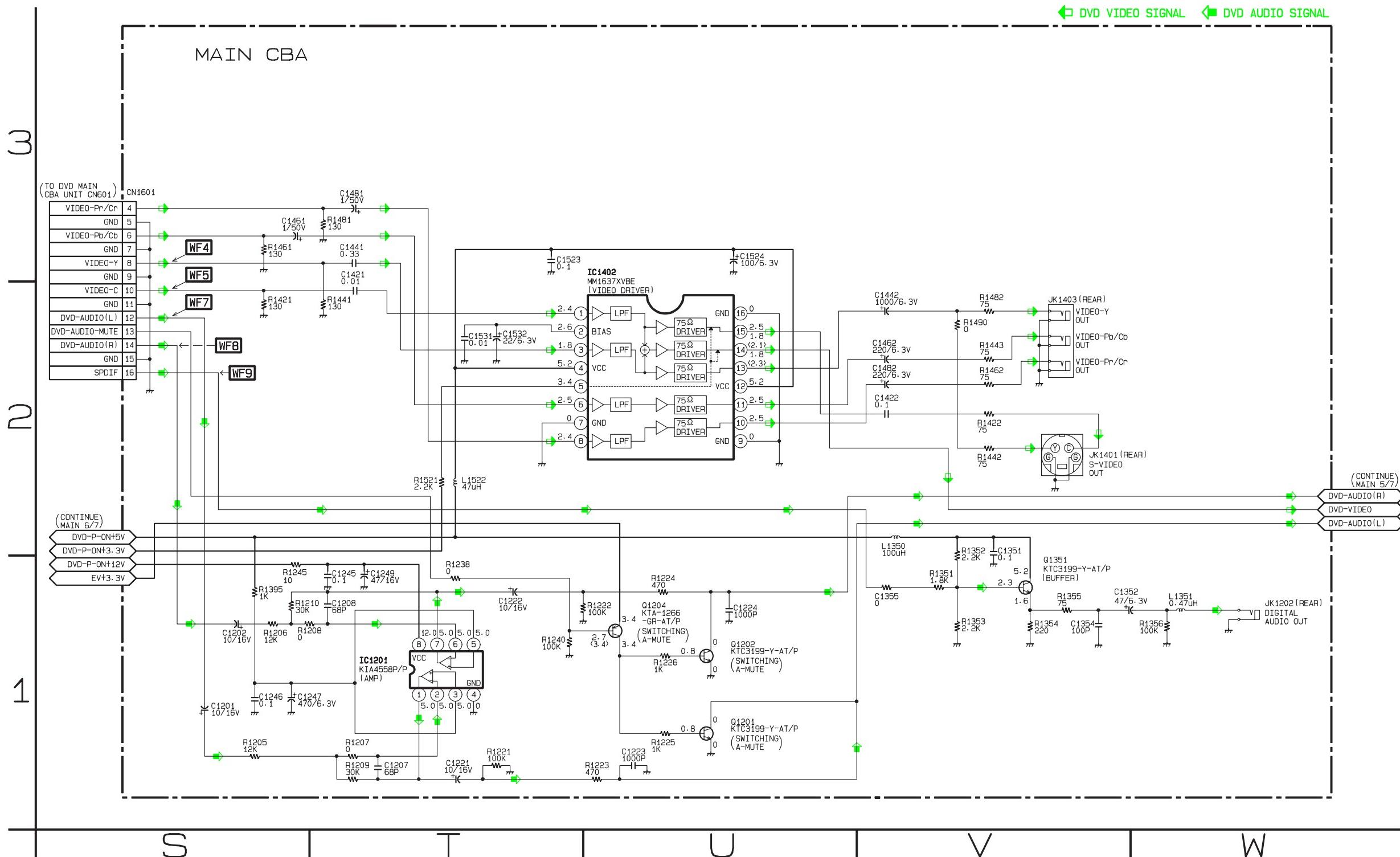
Main 2/7, Sensor & Power SW Schematic Diagram < VCP Section >



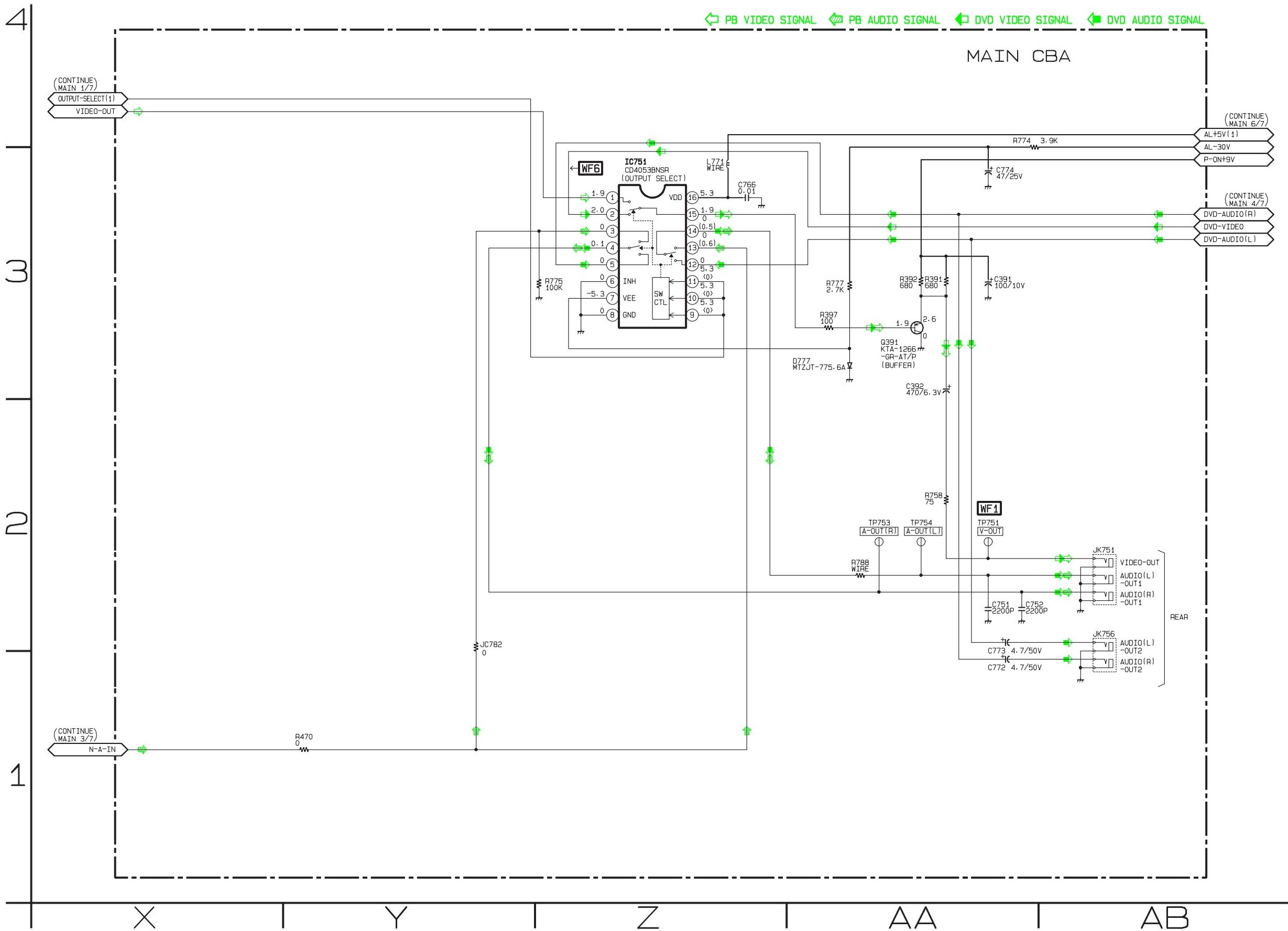
Main 3/7 Schematic Diagram < VCP Section >



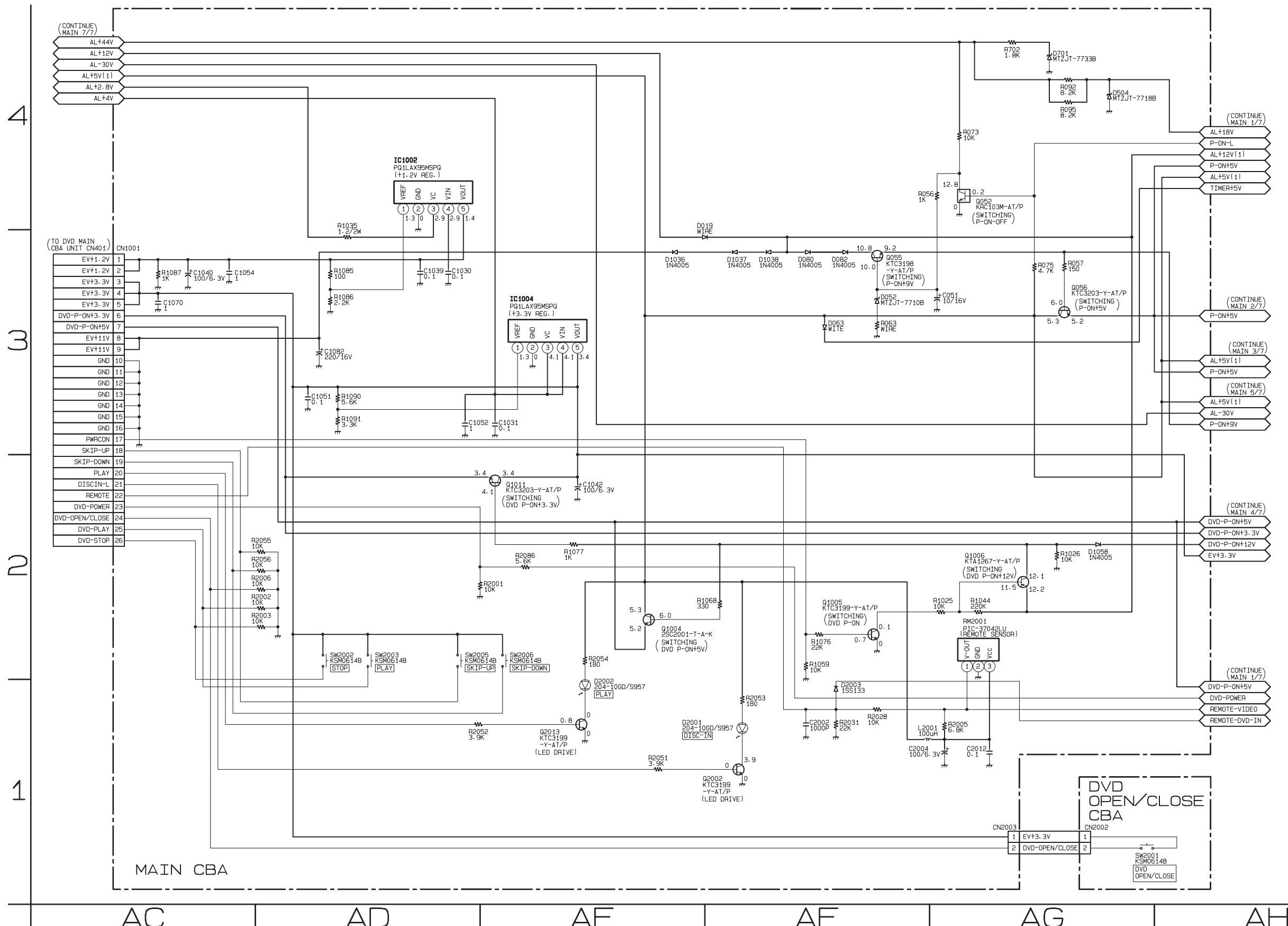
Main 4/7 Schematic Diagram < VCP Section >



Main 5/7 Schematic Diagram < VCP Section >



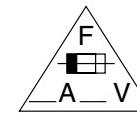
Main 6/7 & DVD Open/Close Schematic Diagram < VCP Section >



Main 7/7 Schematic Diagram < VCP Section >

CAUTION !

Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit. If Main Fuse (F1001) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.



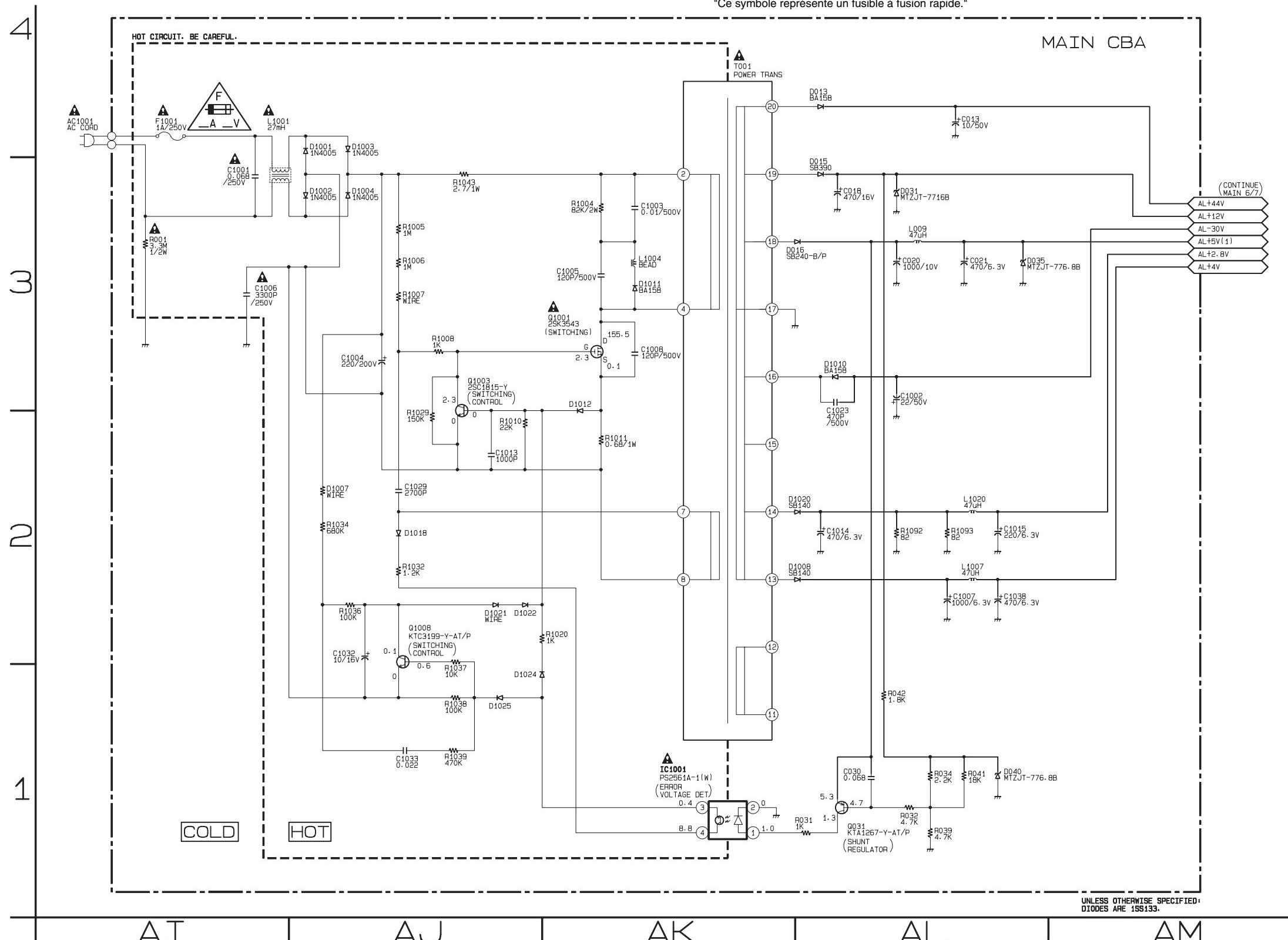
CAUTION

For continued protection against fire hazard,
replace only with the same type fuse.

ATTENTION : Pour une protection continue les risques
d'incendie n'utiliser que des fusibles de même type.

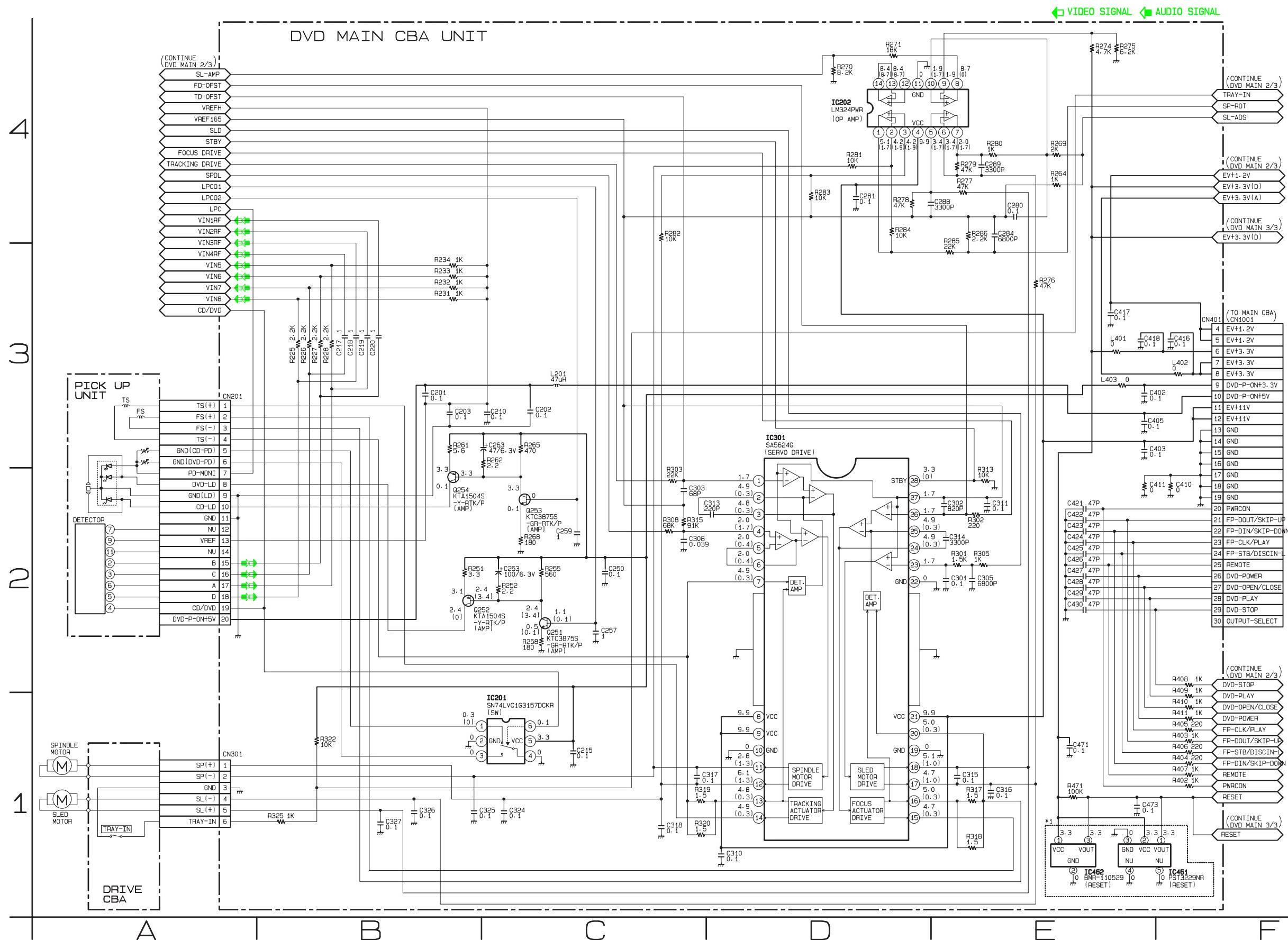
NOT

The voltage for parts in hot circuit is measured using hot GND as a common terminal.

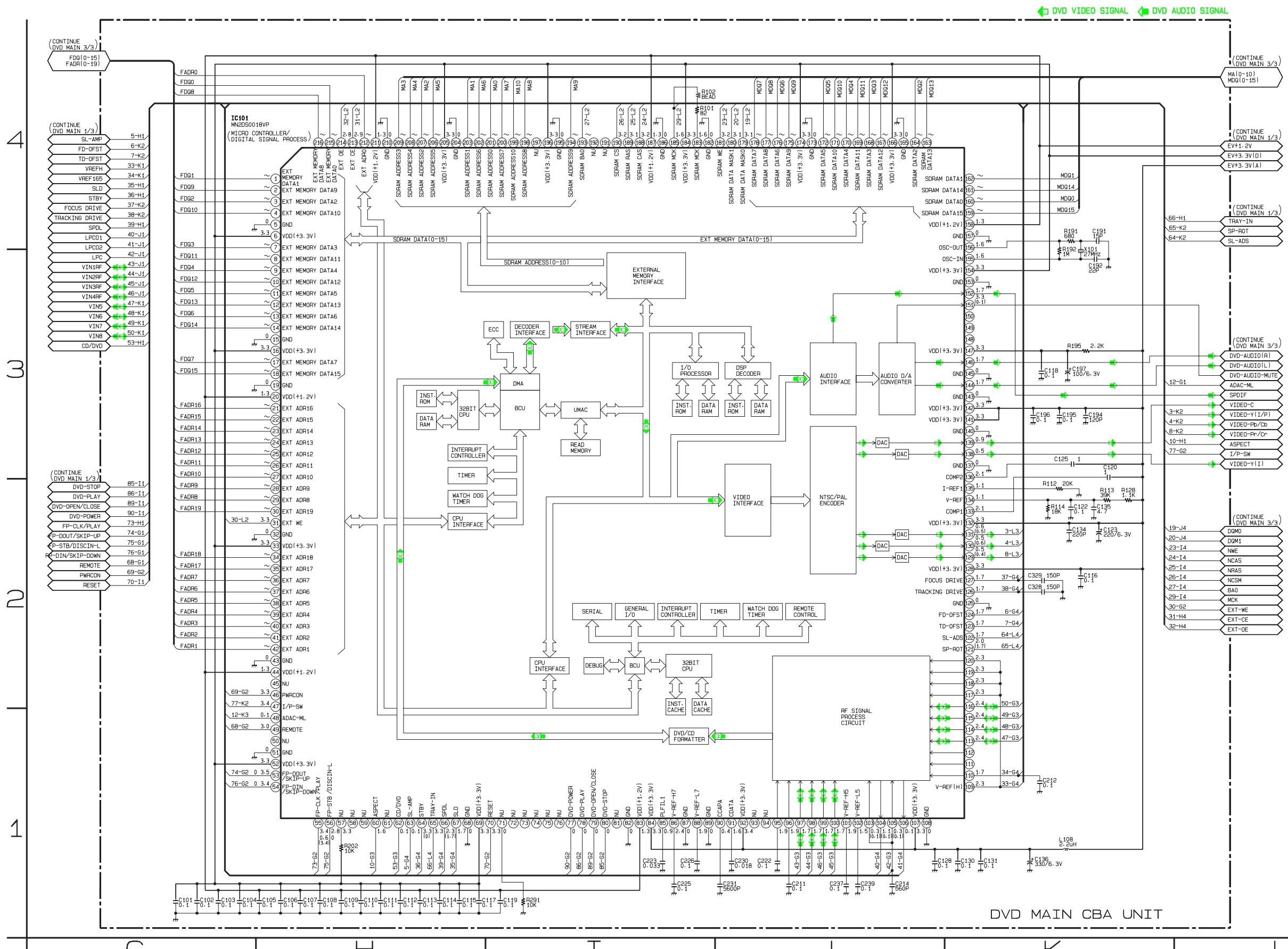


DVD Main 1/3 Schematic Diagram < DVD Section >

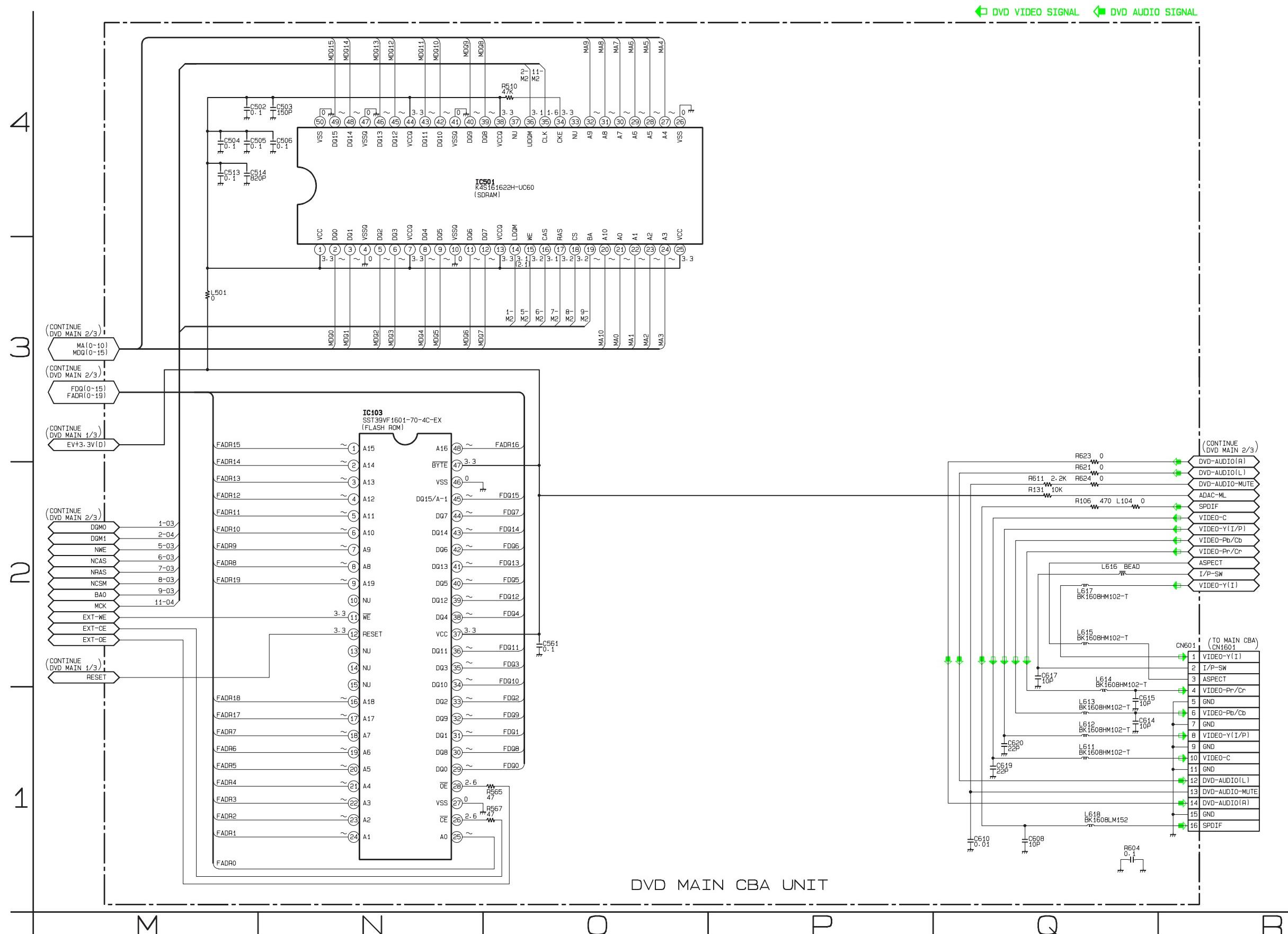
***1 NOTE:**
Either IC461 or IC462 is used for DVD MAIN CBA UNIT



DVD Main 2/3 Schematic Diagram < DVD Section >



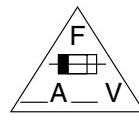
DVD Main 3/3 Schematic Diagram < DVD Section >



Main CBA Top View

CAUTION !

Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit. If Main Fuse (F1001) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.



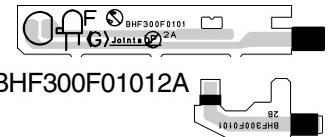
CAUTION !

For continued protection against fire hazard, replace only with the same type fuse.
ATTENTION : Pour une protection continue les risques d'incendie n'utiliser que des fusibles de même type.

Risk of fire-replace fuse as marked.

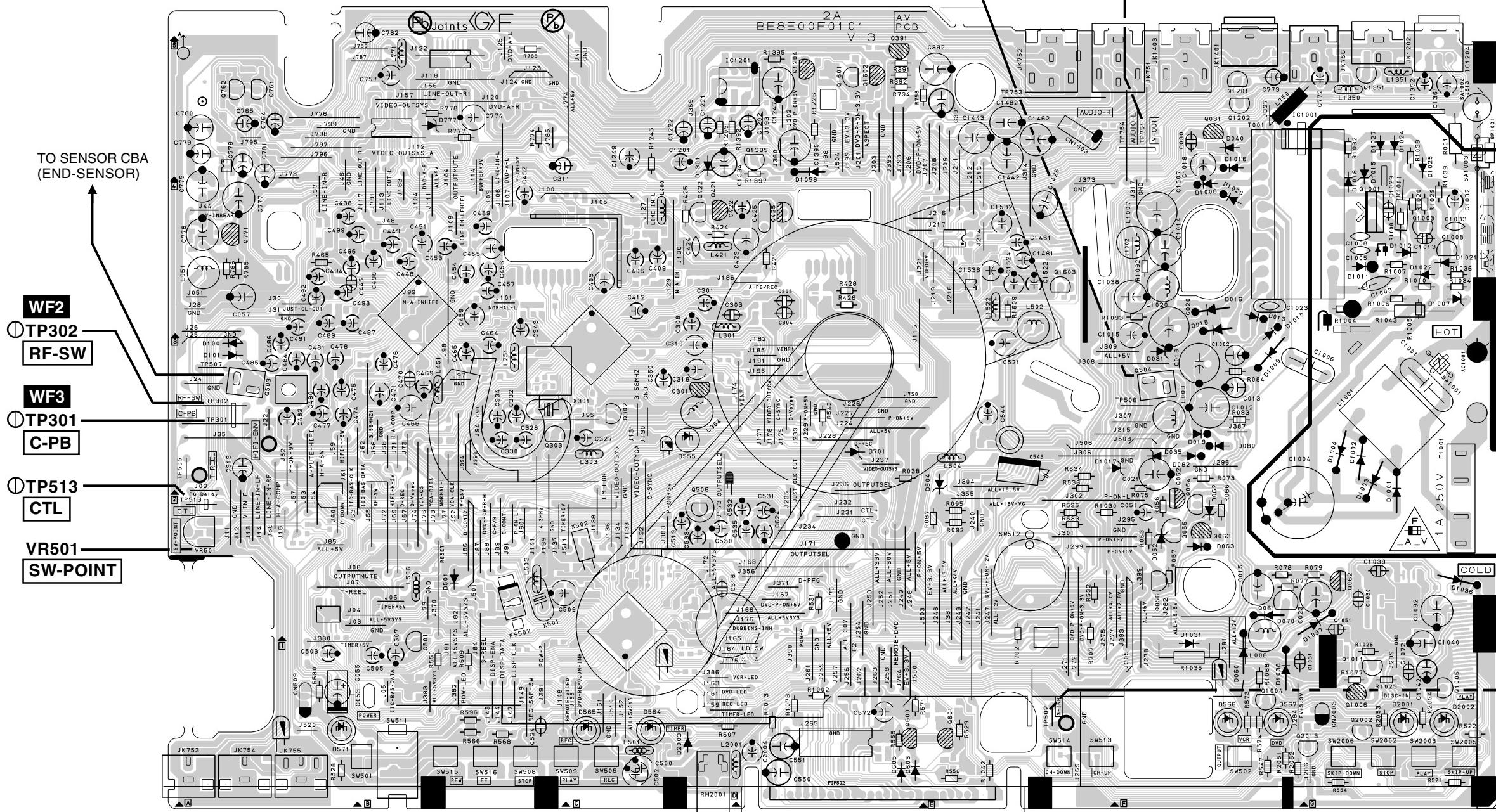
- This symbol means fast operating fuse."
- "Ce symbole représente un fusible à fusion rapide."

Sensor CBA Top View



BHF300F01012A

BHF300F01012B

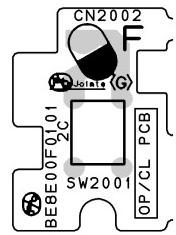


Because a hot chassis ground is present in the power supply circuit, an isolation transformer must be used. Also, in order to have the ability to increase the input slowly, when troubleshooting this type power supply circuit, a variable isolation transformer is required.

NOTE:

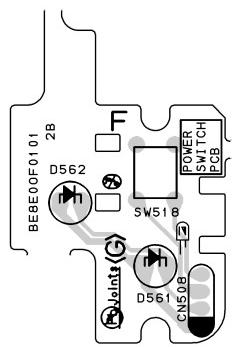
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

DVD Open/Close CBA Top View



BE8E00F01012C

Power SW CBA Top View

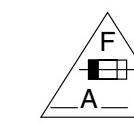


BE8E00F01012B

Main CBA Bottom View

CAUTION !

Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit. If Main Fuse (F1001) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.



CAUTION !

For continued protection against fire hazard, replace only with the same type fuse.
ATTENTION : Pour une protection continue les risques d'incendie n'utiliser que des fusibles de même type.

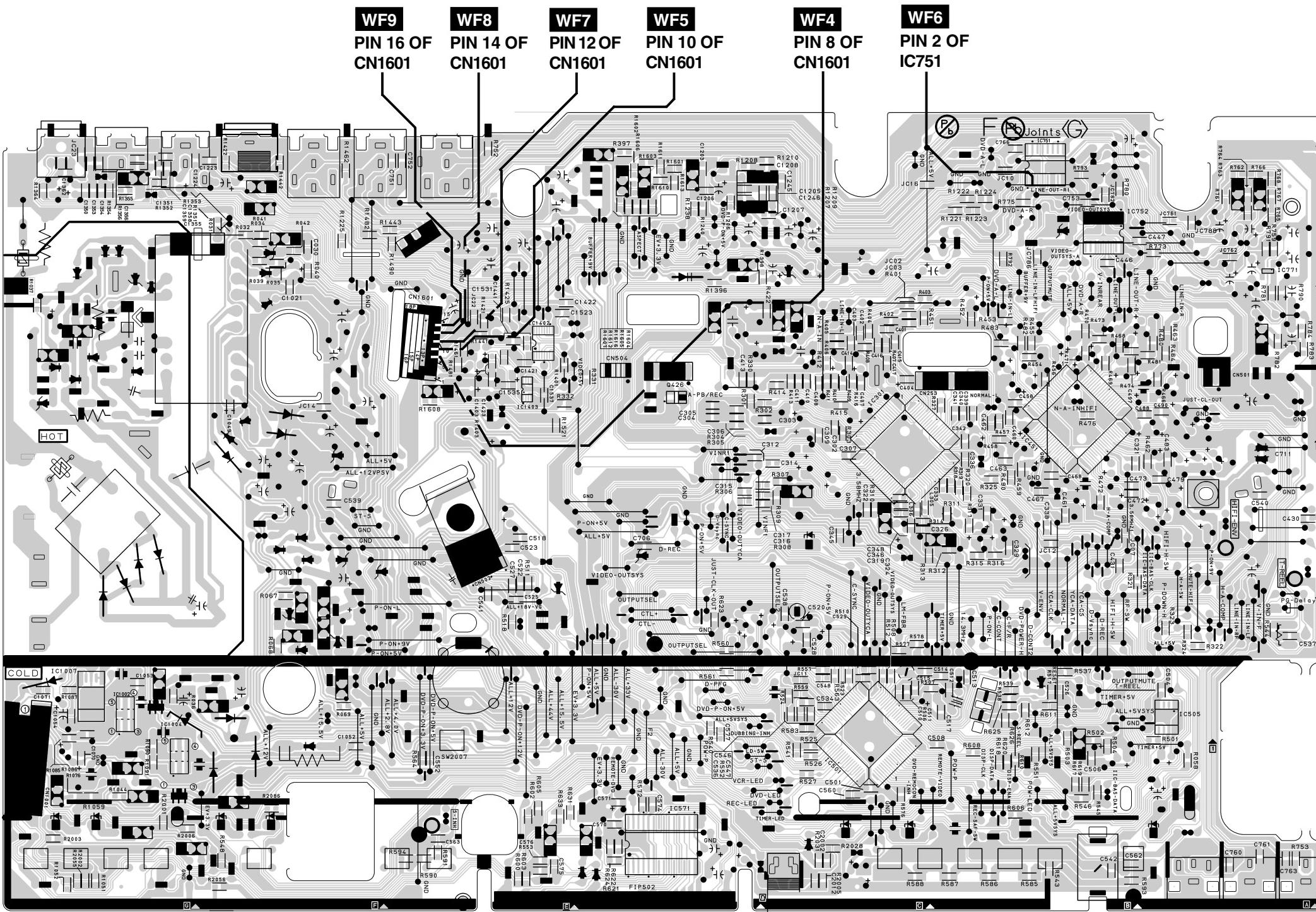
Risk of fire-replace fuse as marked.

"This symbol means fast operating fuse."
"Ce symbole représente un fusible à fusion rapide."

Because a hot chassis ground is present in the power supply circuit, an isolation transformer must be used. Also, in order to have the ability to increase the input slowly, when troubleshooting this type power supply circuit, a variable isolation transformer is required.

NOTE:

The voltage for parts in hot circuit is measured using hot GND as a common terminal.



WAVEFORMS

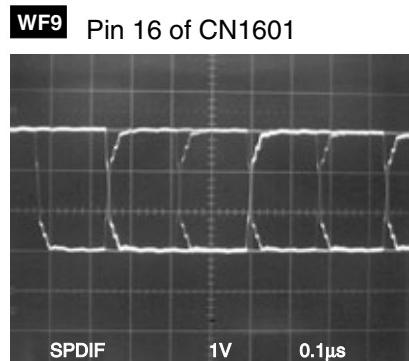
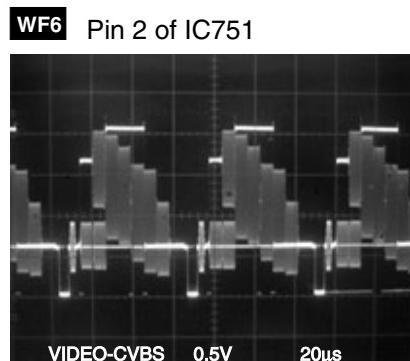
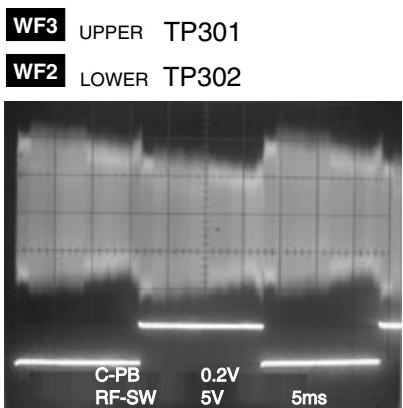
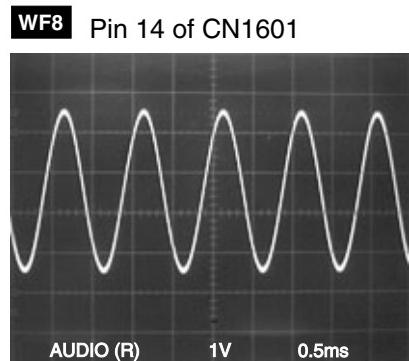
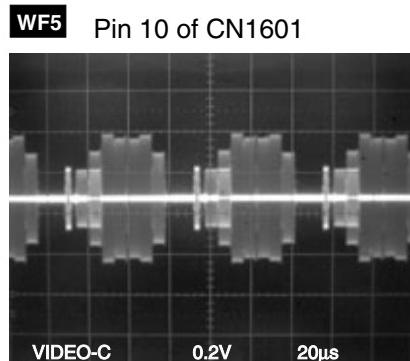
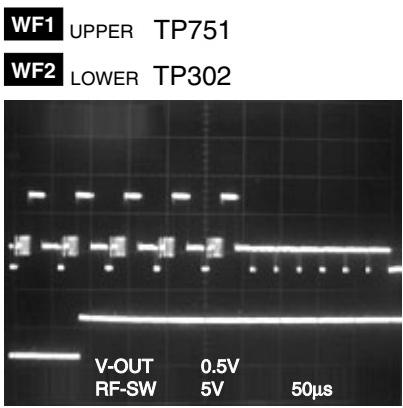
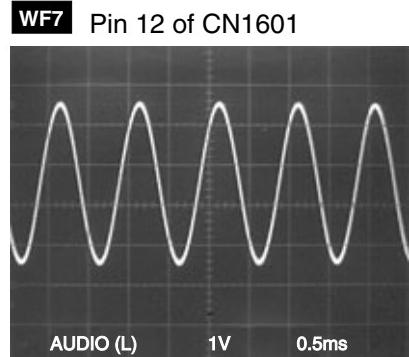
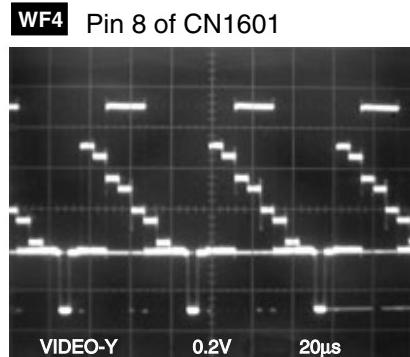
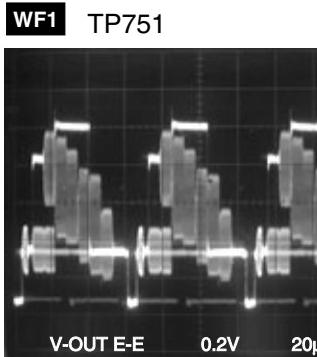
NOTE:

Input

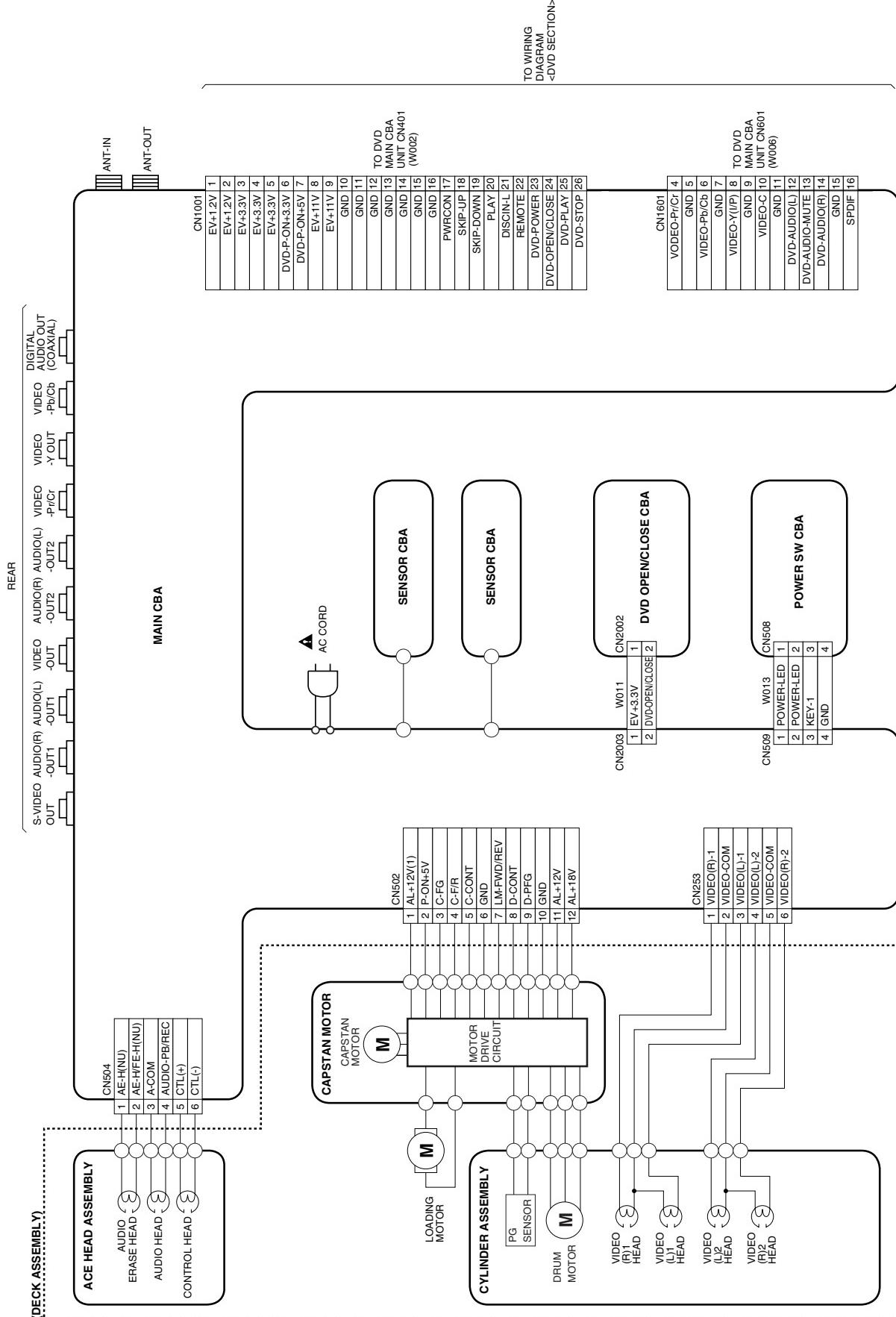
VCR: COLOR BAR SIGNAL (WITH 1KHz AUDIO SIGNAL)
(WF1~WF3)

DVD: POWER ON (STOP) MODE
(WF4~WF6)

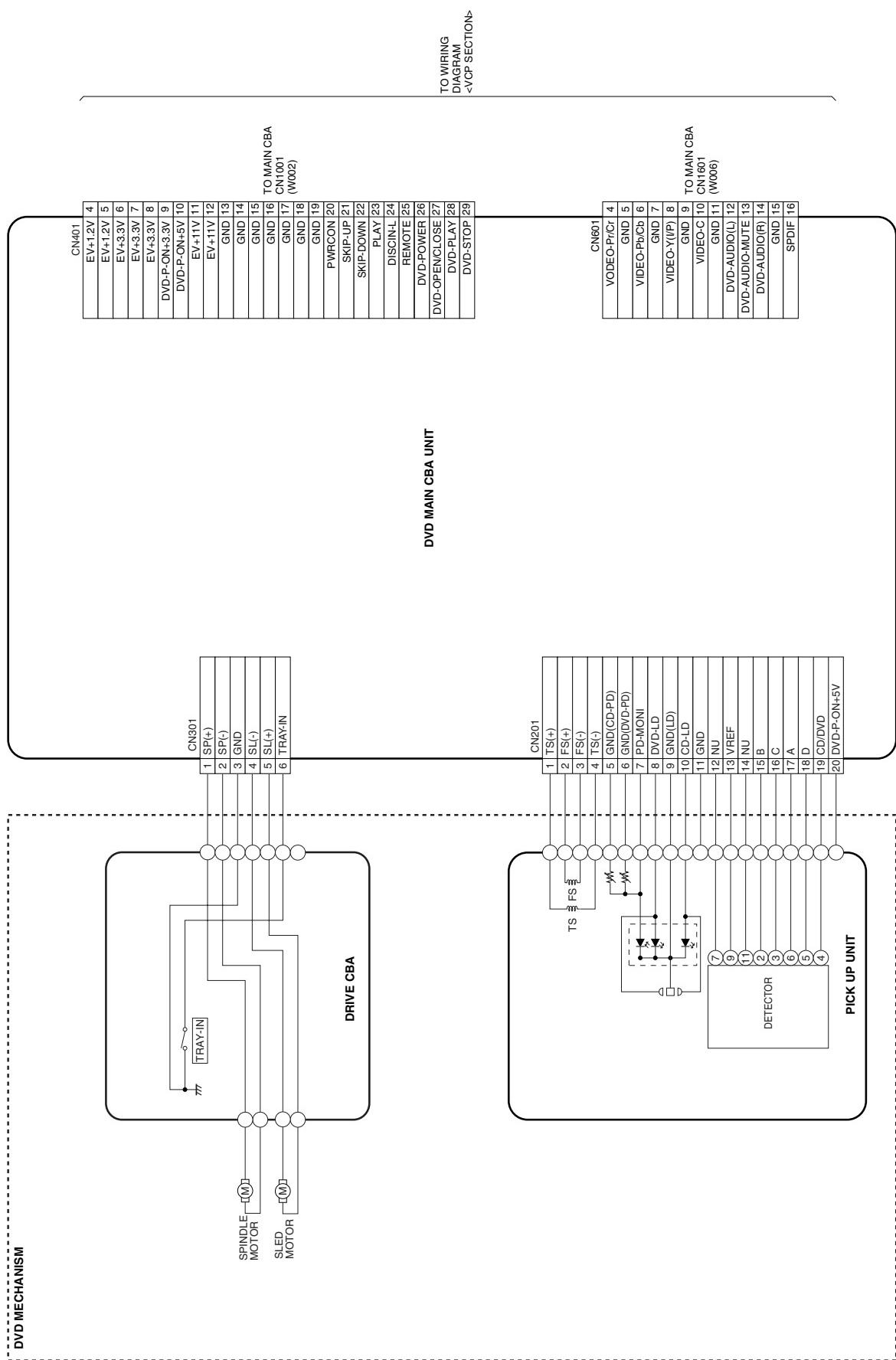
CD: 1kHz PLAY
(WF7~WF9)



WIRING DIAGRAM < VCP SECTION >



WIRING DIAGRAM < DVD SECTION >



SYSTEM CONTROL TIMING CHARTS

< VCP Section >

Mode SW: LD-SW

LD-SW Position detection A/D Input voltage Limit (Calculated voltage)	Symbol
3.76 V ~ 4.50 V (4.12 V)	EJ
4.51 V ~ 5.00 V (5.00 V)	CL
0.00 V ~ 0.25 V (0.00 V)	SB
1.06 V ~ 1.50 V (1.21 V)	TL
0.66 V ~ 1.05 V (0.91 V)	FB
1.99 V ~ 2.60 V (2.17 V)	SF
1.51 V ~ 1.98 V (1.80 V)	SM
3.20 V ~ 3.75 V (3.40 V)	AU
0.26 V ~ 0.65 V (0.44 V)	AL
4.51 V ~ 5.00 V (5.00 V)	SS
2.61 V ~ 3.19 V (2.97 V)	RS

↑
Note:

Note: EJ → RS: Loading FWD (LM-FWD / REV "H")
 RS → EJ: Loading REV (LM-FWD / REV "L")
 Stop (A) = Loading
 Stop (B) = Unloading

Note:

Symbol	Loading Status
EJ	Eject
CL	Eject ~ REW Reel
SB	REW Reel ~ Stop (B)
TL	Stop (B) ~ Brake Cancel
FB	Brake Cancel ~ FF / REW
SF	FF / REW ~ Stop (M), (FF / REW)
SM	Stop (M), (FF / REW) ~ Stop (A)
AU	Stop (A) ~ Play / REC
AL	Play / REC ~ Still / Slow
SS	Still / Slow ~ RS (REW Search)
RS	RS (REW Search)

Still/Slow Control Frame Advance Timing Chart

1) SP Mode

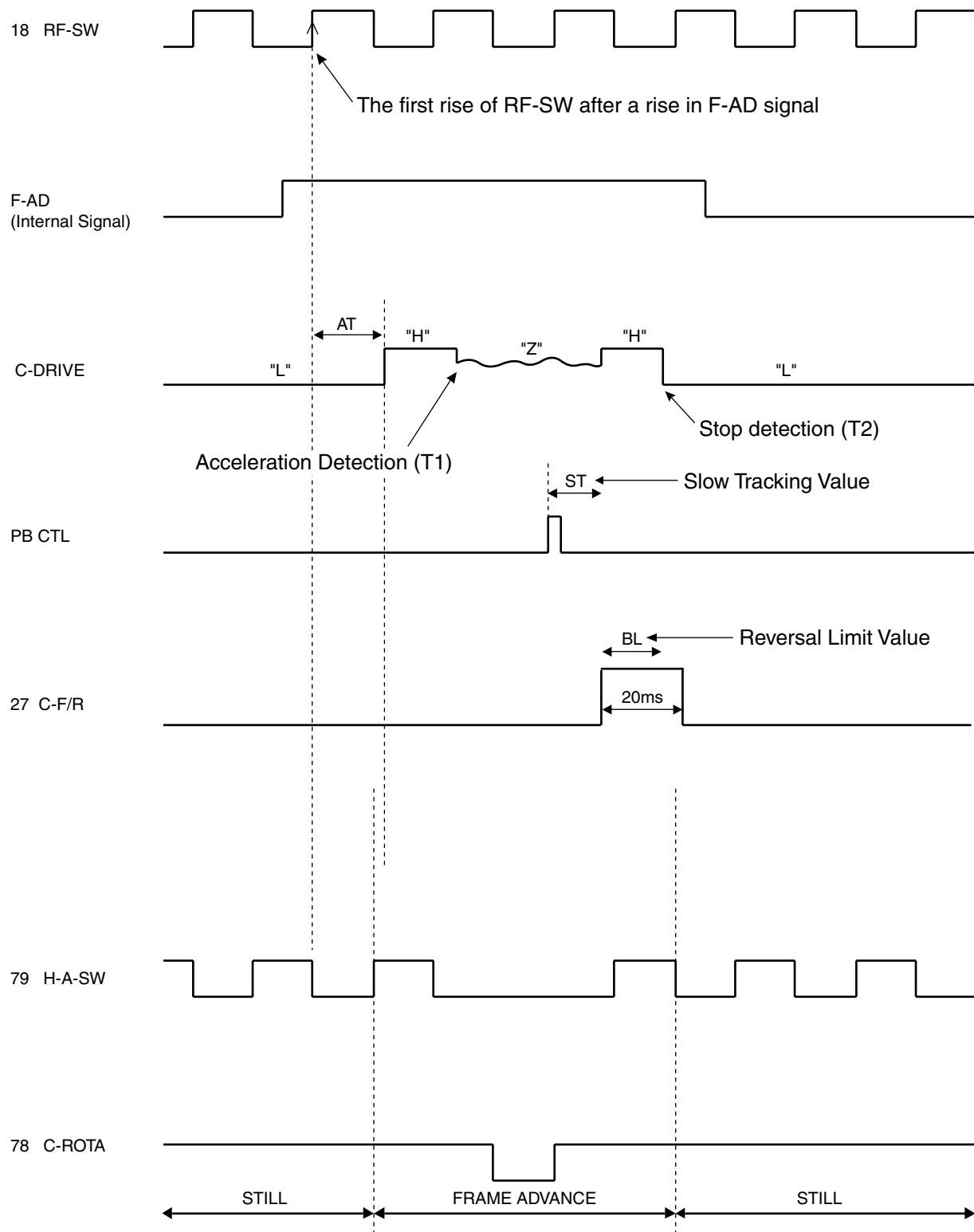


Fig. 1

2) LP/SLP Mode

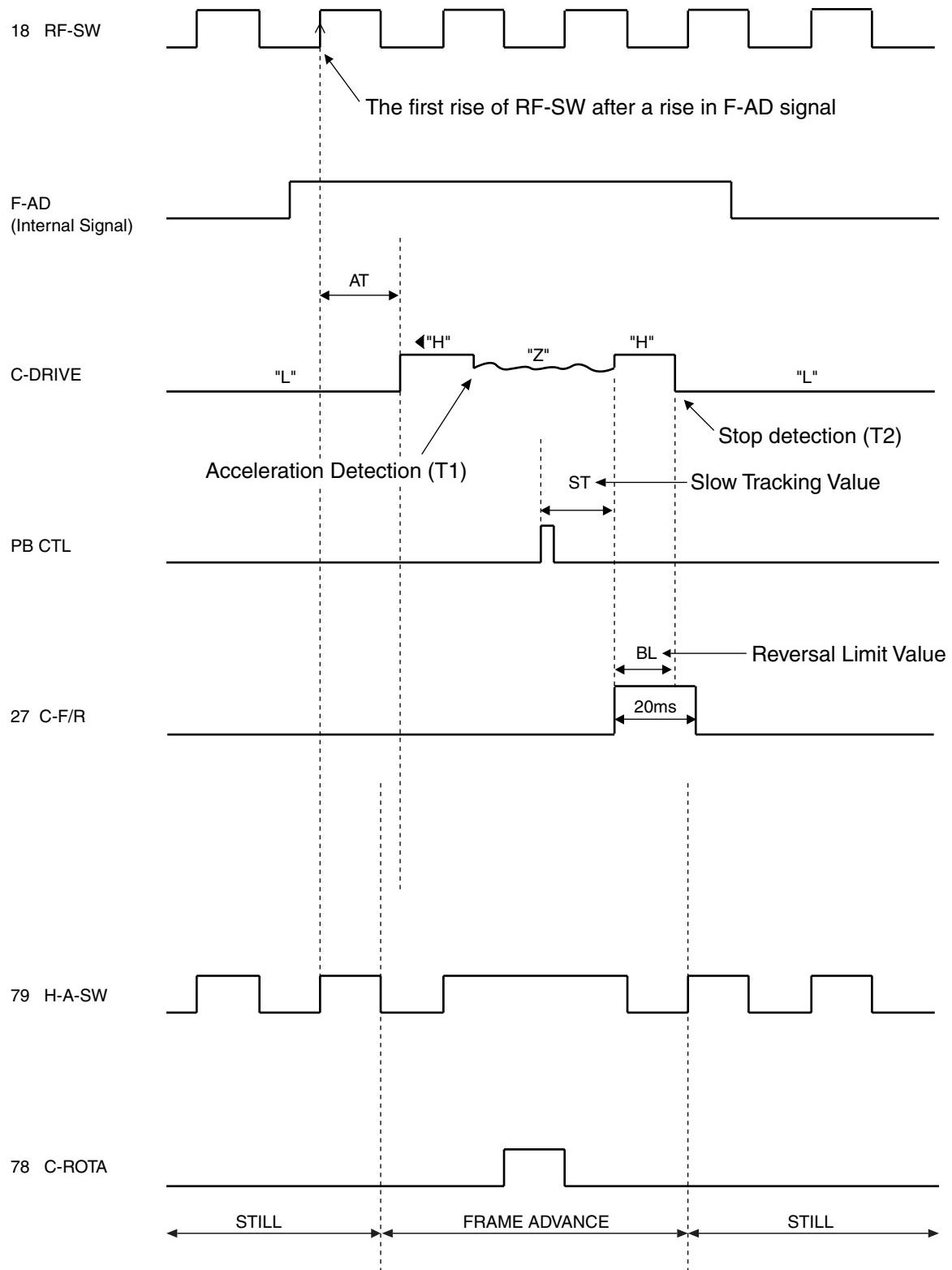


Fig. 2

1. EJECT (POWER OFF) -> CASSETTE IN (POWER ON) -> STOP(B) -> STOP(A) -> PLAY -> RS -> FS -> PLAY -> STILL -> PLAY -> STOP(A)

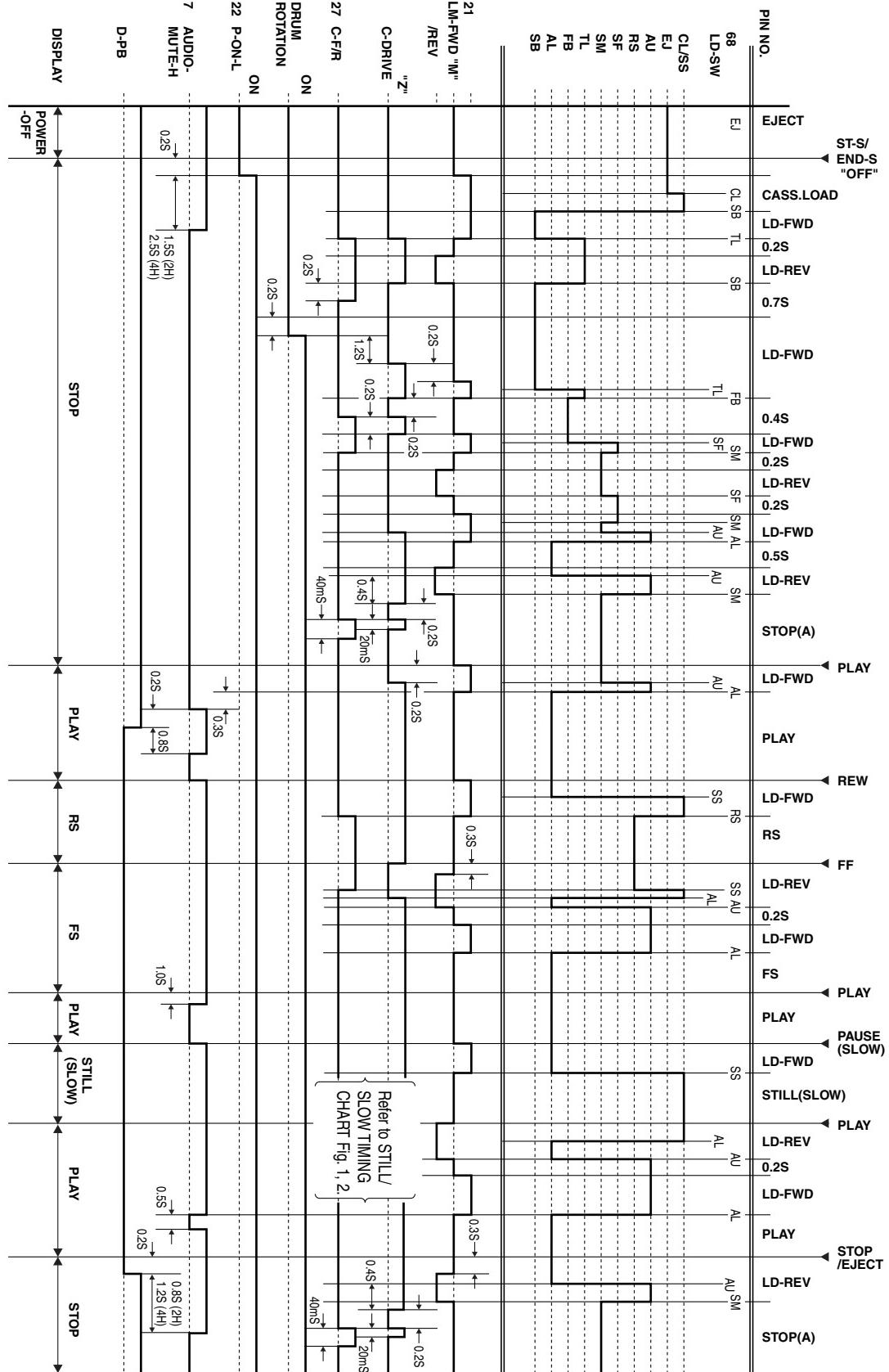


Fig. 3

2. STOP(A) -> FF -> STOP(A) -> REW -> STOP(A) -> EJECT

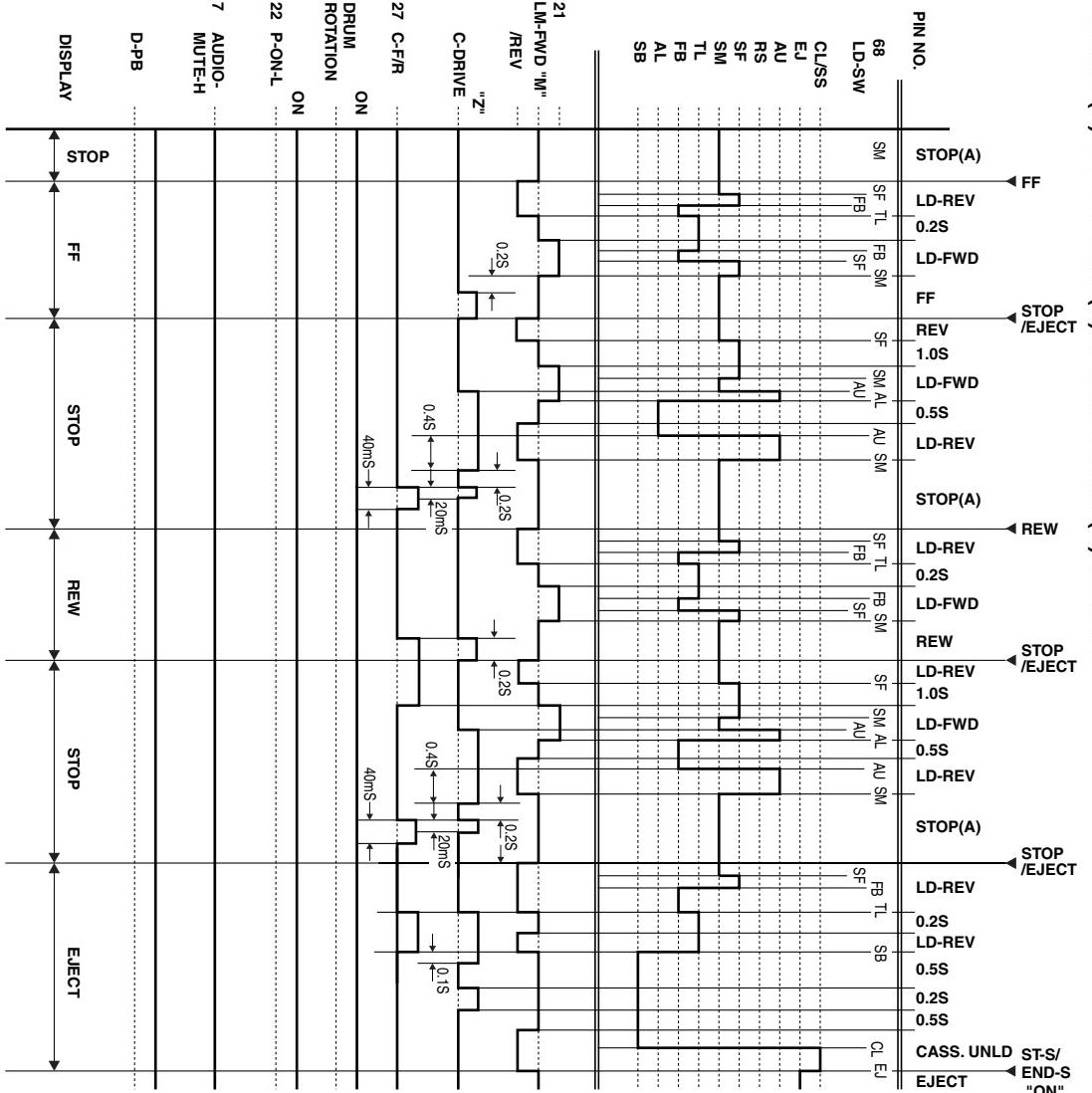
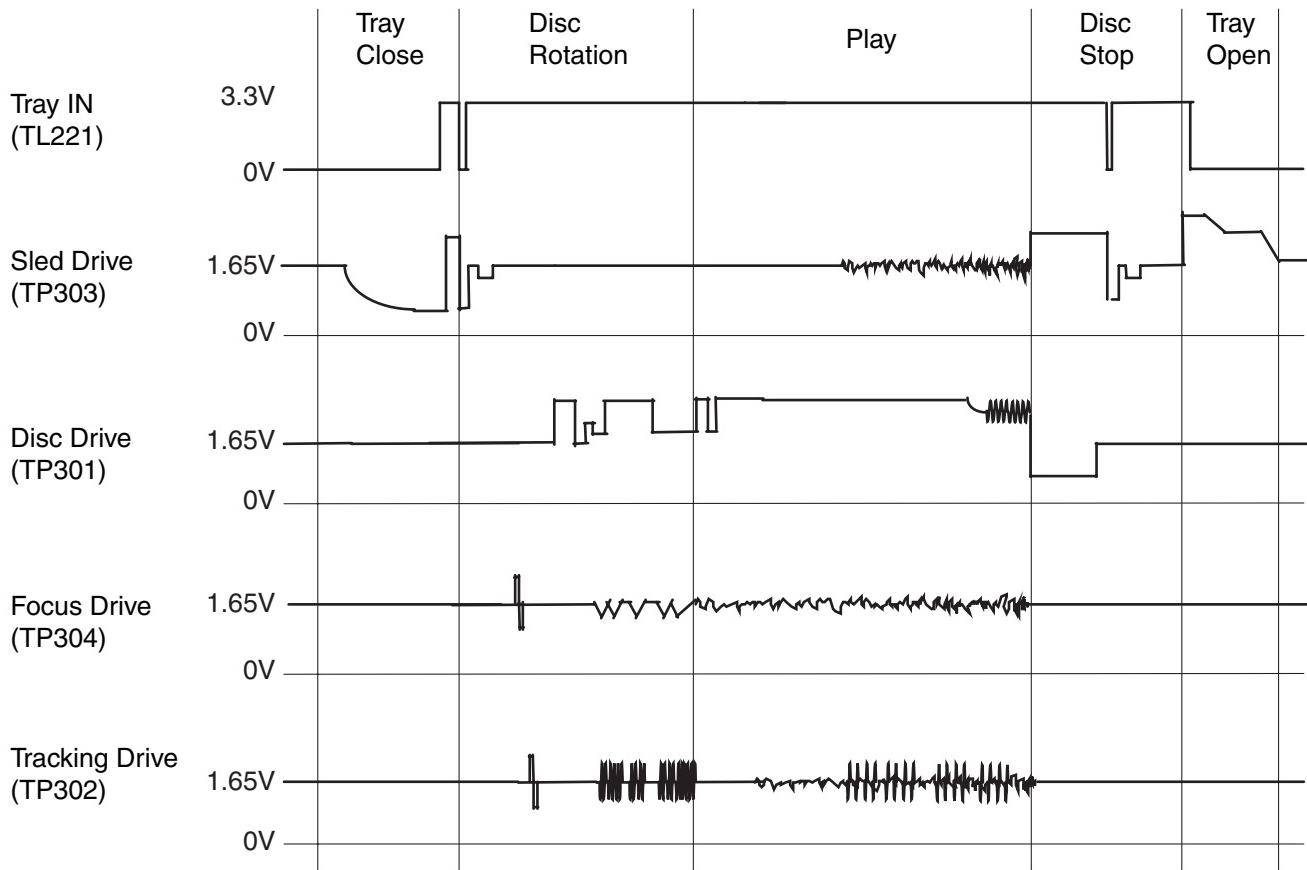


Fig. 4

< DVD Section >

Tray Close ~ Play / Play ~ Tray Open



IC PIN FUNCTION DESCRIPTIONS

< VCP Section >

IC501 (SERVO/SYSTEM CONTROL/OSD)

"H" ≥ 4.5 V, "L" ≤ 1.0 V

Pin No.	IN/OUT	Signal Name	Function	Active Level
1	-	NU	Not Used	-
2	-	NU	Not Used	-
3	IN	T-REEL	Take Up Reel Rotation Signal	PULSE
4	IN	REMOTE-DVD	Remote Control Sensor	L
5	IN	REMOTE-VIDEO	Remote Control Sensor	L
6	-	NU	Not Used	-
7	OUT	AUDIO-MUTE-H	Audio Mute Control Signal (Mute = "H")	H
8	-	NU	Not Used	-
9	-	NU	Not Used	-
10	OUT	POWER-LED	POWER LED Signal Output	H/L
11	OUT	POWER-LED	POWER LED Signal Output	H/L
12	IN/OUT	IIC-BUS-SDA	IIC BUS Control Data	H/L
13	OUT	IIC-BUS-SCL	IIC BUS Control Clock	H/L
14	OUT	YCA-SCL	YCA IC Control Clock	H/L
15	OUT	YCA-SDA	YCA IC Control Data	H/L
16	OUT	YCA-CS	YCA IC Control Chip Select	H
17	-	NU	Not Used	-
18	OUT	RF-SW	Video Head Switching Pulse	H/L
19	OUT	D-V SYNC	Dummy V-sync Output	H/Hi-z
20	IN	RESET	System Reset Signal (Reset = "L")	L
21	OUT	LM-FWD/REV	Loading Motor FWD/ REV Output	H/Z/L
22	OUT	P-ON-L	Power On Signal to Low	L
23	-	NU	Not Used	-
24	OUT	D-REC-H	Delayed Record Signal	H

Pin No.	IN/OUT	Signal Name	Function	Active Level
25	-	NU	Not Used	-
26	OUT	DVD-POWER	DVD Power Control Signal	H
27	OUT	C-F/R	Capstan Motor FWD/REV Control Signal (FWD = "L" / REV = "H")	H/L
28	OUT	C-CONT	Capstan Motor Control Signal	PWM
29	OUT	D-CONT	Drum Motor Control Signal	PWM
30	-	NU	Not Used	-
31	-	VDD	VDD	-
32	OUT	OSCO	Main Clock Output 14.31818MHz	-
33	IN	OSCI	Main Clock Input 14.31818MHz	-
34	-	VSS	VSS	-
35	-	NU	Not Used	-
36	-	NU	Not Used	-
37	IN	SXI	Operation Mode Selecting Input Signal	-
38	OUT	VIDEO-OUT	Composite Video Signal Output	-
39	-	Vss2	Vss2	-
40	IN	VIDEO-IN	Composite Video Signal Input	-
41	IN	C-SYNC	Composite Synchronized Pulse	PULSE
42	-	VDD2	VDD2	-
43	IN	AFCC	Low Path Filter Input Signal For AFC	-
44	OUT	AFCLPF	Low Path Filter Output Signal For AFC	-
45	-	NU	Not Used	-
46	OUT	OUTPUT-SELECT (1)	Output Select	H/L
47	IN	D-PFG	Drum PG/FG Input Signal	PULSE
48	IN	POWER-SAFETY	P-ON Power Supply Abnormal Detection Input	L
49	IN	C-FG	Capstan Motor Rotation Detection Pulse	PULSE

Pin No.	IN/OUT	Signal Name	Function	Active Level
50	-	AFG	GND	-
51	OUT	VRO	Servo Standard Voltage Output	-
52	IN	VRI	Servo Standard Voltage Input	-
53	-	AVss	AVSS	-
54	IN	CTLA	CTL Amp. AC GND	-
55	-	AVDD	AVDD	-
56	IN/OUT	CTL (+)	Playback/Record Control Signal (+)	-
57	IN/OUT	CTL (-)	Playback/Record Control Signal (-)	-
58	OUT	CTL	Amp. Output Control Signal for Test Point	-
59	-	NU	Not Used	-
60	IN	DVD-POW-MONITOR	DVD Power Monitor Signal (P-off = "L", P-on = "H")	H/L
61	-	NU	Not Used	-
62	IN	END-S	Tape End Position Detect Signal	A/D
63	IN	AFC	Automatic Frequency Control Signal	A/D
64	IN	V-ENV	Video Envelope Comparator Signal	A/D
65	IN	PG-DELAY	Video Head Switching Pulse Signal Adjusted Voltage	A/D
66	IN	KEY-2	A/D Key Data Signal 2	A/D
67	IN	KEY-1	A/D Key Data Signal 1	A/D
68	IN	LD-SW	Deck Mode Position Detector Signal	A/D
69	IN	ST-S	Tape Start Position Detector Signal	A/D
70	OUT	VCP-LED-L	VCP Mode LED Signal Output	L
71	OUT	VCP-LED-L	VCP Mode LED Signal Output	L
72	OUT	DVD-LED-L	DVD Mode LED Signal Output	L
73	OUT	DVD-LED-L	DVD Mode LED Signal Output	L
74	OUT	PLAY-LED-L	PLAY Mode LED Signal Output	L

Pin No.	IN/OUT	Signal Name	Function	Active Level
75	OUT	PLAY-LED-L	PLAY Mode LED Signal Output	L
76	OUT	CAS.IN-LED-L	CAS.IN Mode LED Signal Output	L
77	OUT	CAS.IN-LED-L	CAS.IN Mode LED Signal Output	L
78	OUT	C-ROTA	Color Phase Rotary Changeover Signal	H/L
79	OUT	H-A-SW	Video Head Amp Switching Pulse	H/L
80	IN	H-A-COMP	Head Amp Comparator Signal	H/L

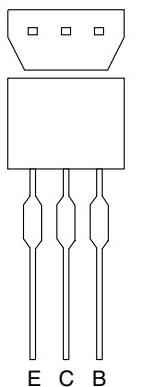
Notes:

Abbreviation for Active Level:

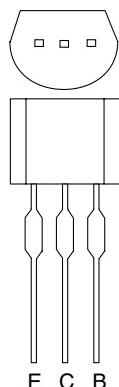
PWM ----- Pulse Wide Modulation

A/D ----- Analog - Digital Converter

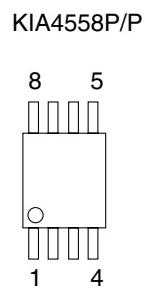
LEAD IDENTIFICATIONS



KRC103M-AT/P
KTA-1266-GR-AT/P
KTA1267-Y-AT/P
KTC3193-Y-AT/P
KTC3199-(Y,BL)-AT/P

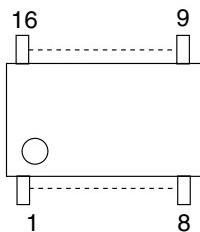


2SC1815-Y(TE2 F T)
KTC3198-Y-AT/P
KTC3203-Y-AT/P
2SC2001-T-A-K



KIA4558P/P

MM1637XVBE

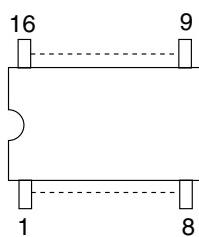


PS2561A-1(W)

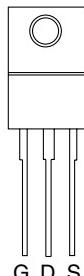


- 1: Anode
2: Cathode
3: Emitter
4: Collector

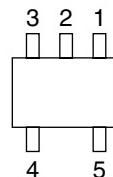
CD4053BNSR



2SK3543(Q)

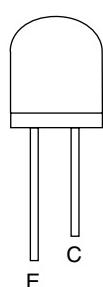


PQ1LAX95MSPQ

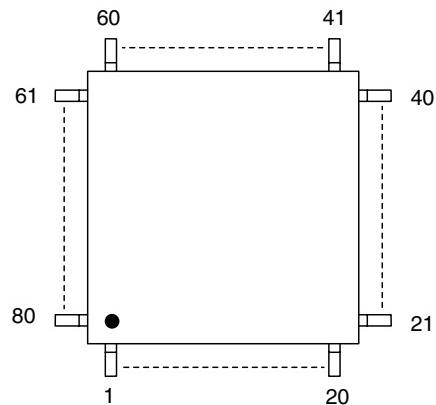


- 1: VREF
2: GND
3: VC
4: VIN
5: VOUT

PT204-6B-12



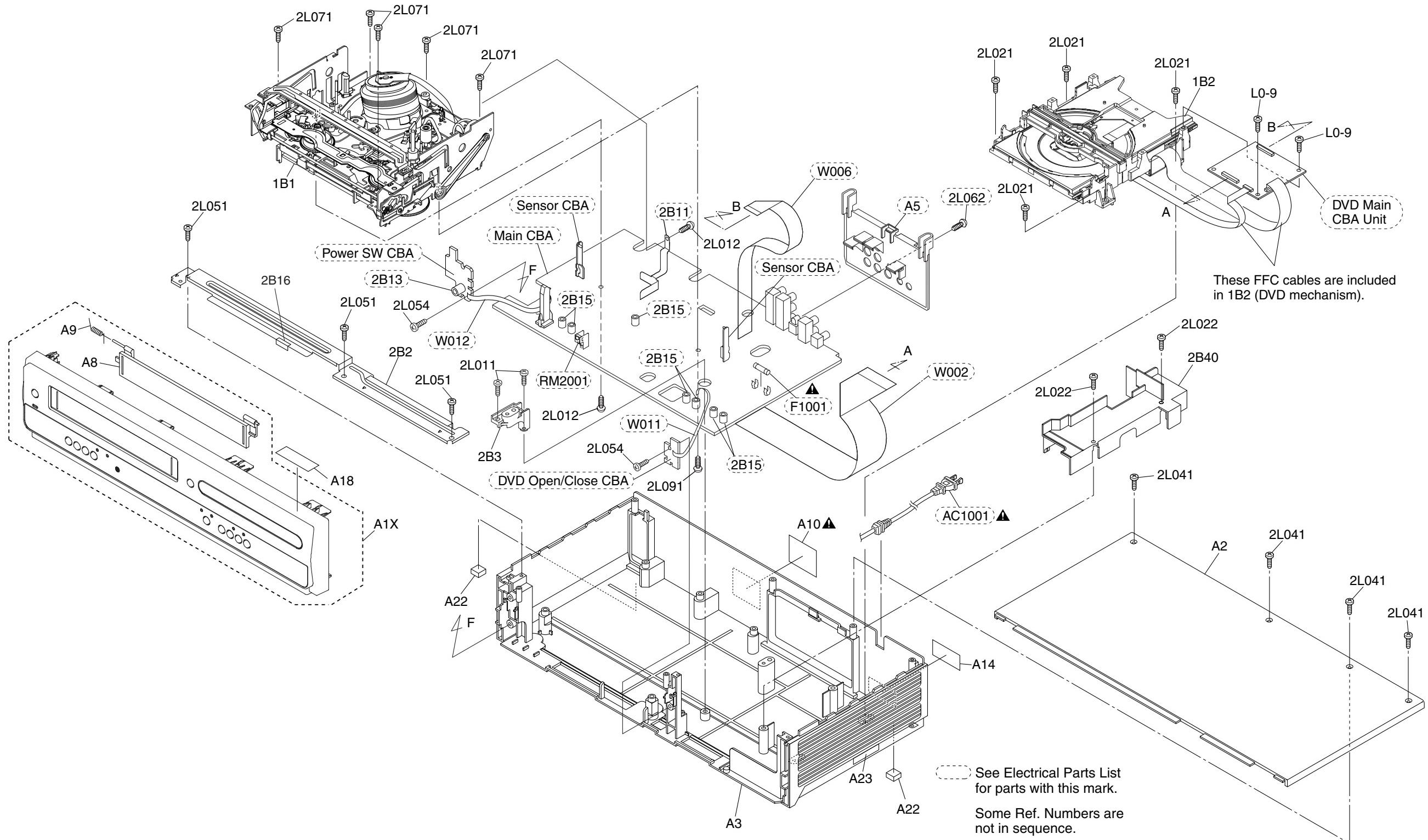
LA71205M-MPB-E
MN101D08DYG



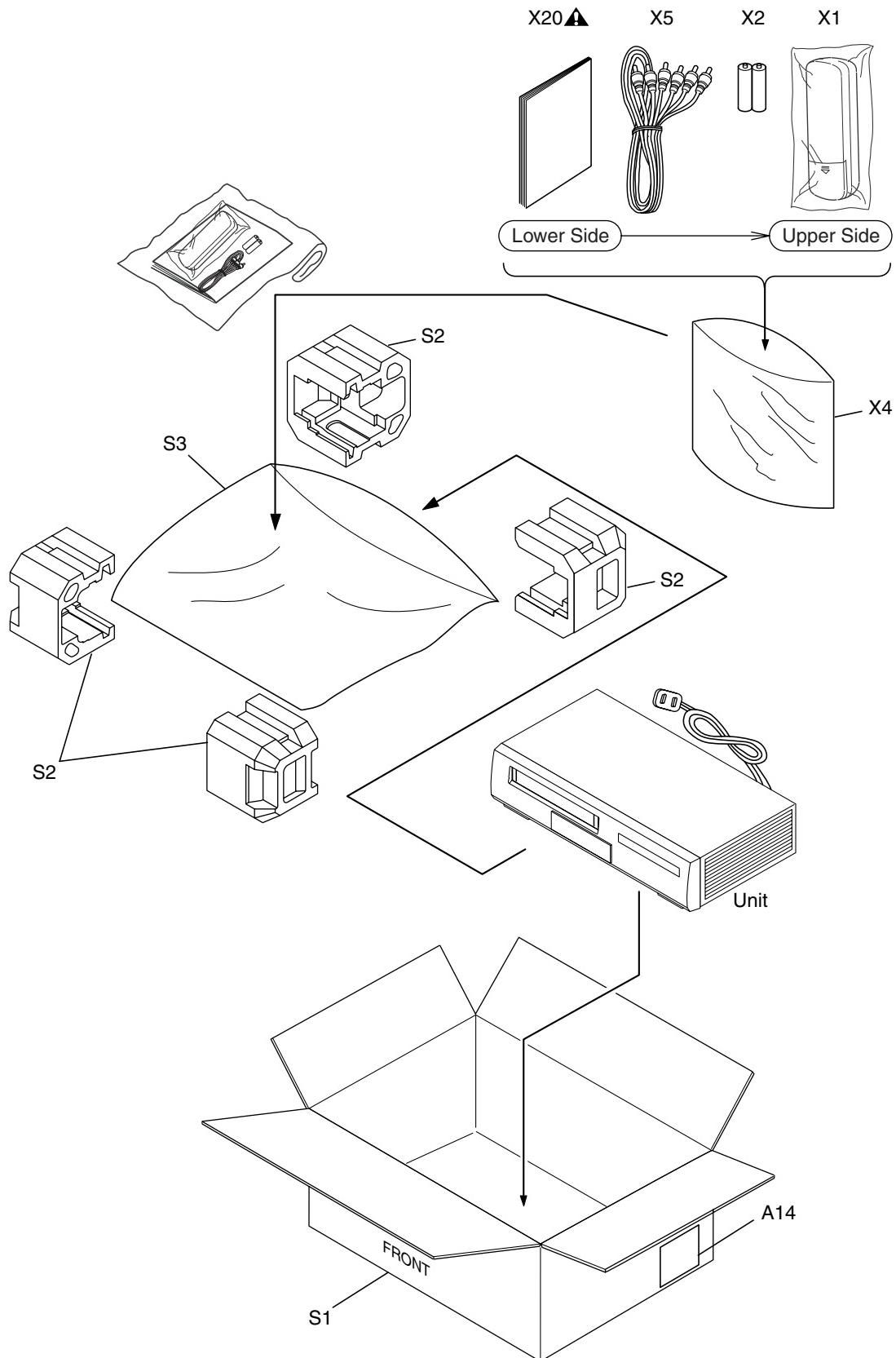
- Note:
A: Anode
K: Cathode
E: Emitter
C: Collector
B: Base
R: Reference
S: Source
G: Gate
D: Drain

EXPLODED VIEWS

Cabinet



Packing



MECHANICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a

▲ have special characteristics important to safety.

Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTE: Parts that are not assigned part numbers (-----) are not available.

Ref. No.	Description	Part No.
A1X	FRONT ASSEMBLY E8C6AUD	1VM222815
A2	TOP CASE H98K0UD	1VM320632
A3	CHASSIS E8C6AUD	1VM222816
A8	CASSETTE DOOR E8C6AUD	1VM425085
A9	DOOR SPRING HF410UD	1VM421240
A10▲	RATING LABEL(U) E8E60UD	-----
A14	LABEL BAR CODE HB400UD	-----
A18	TELEPHONE NO. LABEL H9670UD	-----
A22	CHASSIS FOOT H79P9JD	0VM412315
A23	LABEL EAS L0951UB	-----
1B1	DECK ASSEMBLY CZD014/VM2440	N2440FL
1B2	DVD MECHA E7 N79F0KVM	N79F0KVM
2B2	TOP BRACKET H9600UD	0VM204470
2B3	LOADER HOLDER H9600UD	0VM306676
2B16	TAPE HIMELON H9206JD	0VM413956
2B40	PARTITION PLATE E8A00UD	1VM321985
2L011	SCREW P-TIGHT M3X8 BIND HEAD+	GBJP3080
2L012	SCREW S-TIGHT M3X6 BIND HEAD+	GBJS3060
2L021	SCREW P-TIGHT M3*12 BIND+	GBJP3120
2L022	SCREW P-TIGHT M3X8 BIND HEAD+	GBJP3080
2L041	SCREW P-TIGHT 3X10 BIND HEAD+	GBHP3100
2L051	SCREW P-TIGHT M3X6 BIND HEAD+	GBJP3060
2L054	SCREW P-TIGHT M3X6 BIND HEAD+	GBJP3060
2L071	SCREW P-TIGHT M3*10 WASHERHEAD+	GCJP3100
2L091	SCREW P-TIGHT M3X8 BIND HEAD+	GBCP3080
L0-9	SCREW P-TIGHT M3X8 BIND HEAD+	GBJP3080
PACKING		
S1	GIFT BOX CARTON E8E60UD	1VM323572
S2	STYROFOAM H9600UD	0VM204474E
S3	UNIT BAG E5500UD	0VM411683
ACCESSORIES		
X1	REMOTE CONTROL UNIT NB662UD	NB662UD
X2	DRY BATTERY R6P/2S	XB0M451T0001
X4	ACCESSORY BAG E5700UD	0VM415576
X5	AV CORD WPZ0102TM015	WPZ0102TM015
X20▲	OWNERS MANUAL E8E60UD	1VMN23364

ELECTRICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a **▲** have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTES:

1. Parts that are not assigned part numbers (-----) are not available.
2. Tolerance of Capacitors and Resistors are noted with the following symbols.

C.....±0.25%	D.....±0.5%	F.....±1%
G.....±2%	J.....±5%	K.....±10%
M.....±20%	N.....±30%	Z.....+80/-20%

DVD MAIN CBA UNIT

Ref. No.	Description	Part No.
	DVD MAIN CBA UNIT	N7CFLKUP

MCV CBA

Ref. No.	Description	Part No.
	MCV CBA Consists of the following:	1VSA15384
	MAIN CBA (MCV-A) POWER SW CBA (MCV-B) DVD OPEN/CLOSE CBA (MCV-C) SENSOR CBA	----- 1VSA13493

MAIN CBA

Ref. No.	Description	Part No.
	MAIN CBA (MCV-A) Consists of the following:	-----
CAPACITORS		
C013	ELECTROLYTIC CAP. 10μF/50V M H7	CE1JMASSL100
C018	ELECTROLYTIC CAP. 470μF/16V M	CE1CMASDL471
C020	ELECTROLYTIC CAP. 1000μF/10V M	CE1AMASDL102
C021	ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASDL471
C023	ELECTROLYTIC CAP. 100μF/16V M	CE1CMASDL101
C030	CERAMIC CAP.(AX) B K 0.068μF/50V	CA1J683TU011
C051	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C301	ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C302	CHIP CERAMIC CAP. CH J 390pF/50V	CHD1JJBCH391
C303	CHIP RES.(1608) 1/10W 0.Ω	RRXAZB5Z0000
C304	CHIP CERAMIC CAP. CH J 100pF/50V	CHD1JJBCH101
C305	CHIP CERAMIC CAP. CH J 100pF/50V	CHD1JJBCH101
C307	CHIP CERAMIC CAP. F Z 1μF/10V	CHD1AZB0F105
C308	ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMAVSL470
C309	CHIP CERAMIC CAP. F Z 0.1μF/50V	CHD1JZB0F104
C310	ELECTROLYTIC CAP. 22μF/6.3V M H7	CE0KMAVSL220
C312	CHIP CERAMIC CAP. F Z 1μF/10V	CHD1AZB0F105
C314	CHIP CERAMIC CAP. F Z 1μF/10V	CHD1AZB0F105
C315	CHIP CERAMIC CAP. B K 0.1μF/25V	CHD1EKB0B104
C316	CHIP CERAMIC CAP. F Z 1μF/10V	CHD1AZB0F105
C317	CHIP CERAMIC CAP. F Z 1μF/10V	CHD1AZB0F105
C318	ELECTROLYTIC CAP. 22μF/6.3V M H7	CE0KMAVSL220

Ref. No.	Description	Part No.
C319	CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C324	CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C327	ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMAVSL470
C328	ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C329	CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C330	ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C331	CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C332	ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C333	CHIP CERAMIC CAP. F Z 0.1μF/50V	CHD1JZB0F104
C336	CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C339	CHIP CERAMIC CAP. B K 0.047μF/50V	CHD1JKB0B473
C340	CHIP CERAMIC CAP. B K 0.1μF/25V	CHD1EKB0B104
C341	CHIP CERAMIC CAP. B K 0.047μF/50V	CHD1JKB0B473
C342	CHIP CERAMIC CAP. F Z 0.1μF/50V	CHD1JZB0F104
C343	ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMAVSL470
C346	CHIP CERAMIC CAP. B K 0.1μF/25V	CHD1EKB0B104
C348	CHIP CERAMIC CAP. B K 0.1μF/25V	CHD1EKB0B104
C391	ELECTROLYTIC CAP. 100μF/10V M H7	CE1AMASSL101
C392	ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASDL471
C404	CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C405	ELECTROLYTIC CAP. 22μF/6.3V M H7	CE0KMAVSL220
C406	ELECTROLYTIC CAP. 33μF/6.3V M H7	CE0KMAVSL330
C407	CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C408	CHIP CERAMIC CAP. B K 0.012μF/50V	CHD1JKB0B123
C409	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C410	CHIP CERAMIC CAP. B K 2700pF/50V	CHD1JKB0B272
C411	CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JKB0B102
C412	ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C413	CHIP CERAMIC CAP. B K 6800pF/50V	CHD1JKB0B682
C414	CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JKB0B102
C430	CHIP CERAMIC CAP. CH J 56pF/50V	CHD1JJBCH560
C502	ELECTROLYTIC CAP. 220μF/6.3V M H7	CE0KMAVSL221
C505	ELECTROLYTIC CAP. 22μF/10V M H7	CE1AMAVSL220
C507	ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C508	CHIP CERAMIC CAP. B K 0.033μF/50V	CHD1JKB0B333
C509	ELECTROLYTIC CAP. 220μF/6.3V M H7	CE0KMAVSL221
C513	CHIP CERAMIC CAP. CH D 10pF/50V	CHD1JDBCH100
C521	ELECTROLYTIC CAP. 47μF/25V M H7	CE1EMAVSL470
C522	CHIP CERAMIC CAP. B K 4700pF/50V	CHD1JKB0B472
C523	CHIP CERAMIC CAP. CH J 100pF/50V	CHD1JJBCH101
C525	CHIP CERAMIC CAP. B K 4700pF/50V	CHD1JKB0B472
C527	CHIP CERAMIC CAP. B K 0.047μF/50V	CHD1JKB0B473
C529	CHIP CERAMIC CAP. B K 0.022μF/50V	CHD1JKB0B223
C530	ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C531	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C532	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C533	ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMAVSL470
C534	CHIP CERAMIC CAP. B K 0.1μF/25V	CHD1EKB0B104
C535	ELECTROLYTIC CAP. 22μF/10V M H7	CE1AMAVSL220
C536	CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JKB0B102
C537	CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JKB0B102
C540	CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C541	CHIP CERAMIC CAP. F Z 0.1μF/50V	CHD1JZB0F104
C544	ELECTROLYTIC CAP. 100μF/6.3V H7	CE0KMAVSL101
C560	CHIP CERAMIC CAP. CH J 100pF/50V	CHD1JJBCH101
C577	CHIP CERAMIC CAP. F Z 1μF/10V	CHD1AZB0F105
C751	CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JKB0B222
C752	CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JKB0B222
C766	CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C772	ELECTROLYTIC CAP. 4.7μF/50V M H7	CE1JMAVSL4R7

Ref. No.	Description	Part No.
C773	ELECTROLYTIC CAP. 4.7μF/50V M H7	CE1JMASSL4R7
C774	ELECTROLYTIC CAP. 47μF/25V M H7	CE1EMAVSL470
C1001▲	ACROSS THE LINE CAP. 0.068μF/250V	CT2E683DC016
C1002	ELECTROLYTIC CAP. 22μF/50V M	CE1JMASDL220
C1003	CERAMIC CAP. B K 0.01μF/500V	CCD2JKP0B103
C1004	ELECTROLYTIC CAP. 220μF/200V M	CA2D221S6008
C1005	CERAMIC CAP. B K 120pF/500V	CCD2JKP0B121
C1006▲	SAFETY CAP. 3300pF/250V	CCG2EMA0F332
C1007	ELECTROLYTIC CAP. 1000μF/6.3V M	CE0KMASDL102
C1008	CERAMIC CAP. B K 120pF/500V	CCD2JKP0B121
C1013	CERAMIC CAP.(AX) B K 1000pF/50V	CCA1JKT0B102
C1014	ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASDL471
C1015	ELECTROLYTIC CAP. 220μF/6.3V M H7	CE0KMAVSL221
C1023	CERAMIC CAP. B K 470pF/500V	CCD2JKS0B471
C1029	CERAMIC CAP.(AX) X K 2700pF/16V	CCA1CKT0X272
C1030	CERAMIC CAP.(AX) B K 0.1μF/25V	CCA1EKT0B104
C1031	CERAMIC CAP.(AX) B K 0.1μF/25V	CCA1EKT0B104
C1032	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C1033	CERAMIC CAP. YV Z 0.022μF/50V	CCD1JZSYV223
C1038	ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASDL471
C1039	CERAMIC CAP.(AX) B K 0.1μF/25V	CCA1EKT0B104
C1040	ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASDL101
C1042	ELECTROLYTIC CAP. 100μF/6.3V M H7	CE0KMASSL101
C1051	CERAMIC CAP.(AX) B K 0.1μF/25V	CCA1EKT0B104
C1052	CHIP CERAMIC CAP. F Z 1μF/10V	CHD1AZB0F105
C1053	CHIP CERAMIC CAP. F Z 1μF/10V	CHD1AZB0F105
C1054	CHIP CERAMIC CAP. F Z 1μF/10V	CHD1AZB0F105
C1070	CHIP CERAMIC CAP. F Z 1μF/10V	CHD1AZB0F105
C1082	ELECTROLYTIC CAP. 220μF/16V M H7	CE1CMASSL221
C1201	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C1202	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMASSL100
C1207	CHIP CERAMIC CAP. CH J 68pF/50V	CHD1JJBCH680
C1208	CHIP CERAMIC CAP. CH J 68pF/50V	CHD1JJBCH680
C1221	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMASSL100
C1222	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMASSL100
C1223	CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JKB0B102
C1224	CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JKB0B102
C1245	CHIP CERAMIC CAP. F Z 0.1μF/50V	CHD1JZB0F104
C1246	CHIP CERAMIC CAP. F Z 0.1μF/50V	CHD1JZB0F104
C1247	ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASDL471
C1249	ELECTROLYTIC CAP. 47μF/16V M H7	CE1CMAVSL470
C1351	CHIP CERAMIC CAP. B K 0.1μF/25V	CHD1EKB0B104
C1352	ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMAVSL470
C1354	CHIP CERAMIC CAP. CH J 100pF/50V	CHD1JJBCH101
C1355	CHIP RES.(1608) 1/10W 0 Ω	RRXAZB5Z0000
C1421	CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C1422	CHIP CERAMIC CAP. B K 0.1μF/25V	CHD1EKB0B104
C1441	CHIP CERAMIC CAP. B K 0.33μF/10V	CHD1AKB0B334
C1442	ELECTROLYTIC CAP. 1000μF/6.3V M	CE0KMASDL102
C1461	ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C1462	ELECTROLYTIC CAP. 220μF/6.3V M	CE0KMASDL221
C1481	ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C1482	ELECTROLYTIC CAP. 220μF/6.3V M	CE0KMASDL221
C1523	CHIP CERAMIC CAP. F Z 0.1μF/50V	CHD1JZB0F104
C1524	ELECTROLYTIC CAP. 100μF/6.3V H7	CE0KMAVSL101
C1531	CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C1532	ELECTROLYTIC CAP. 22μF/6.3V M H7	CE0KMAVSL220
C2002	CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JKB0B102
C2004	ELECTROLYTIC CAP. 100μF/6.3V H7	CE0KMAVSL101
C2012	CHIP CERAMIC CAP. F Z 0.1μF/50V	CHD1JZB0F104
DIODES		
D013	RECTIFIER DIODE BA158	NDQZ000BA158

Ref. No.	Description	Part No.
D015	SCHOTTKY BARRIER DIODE SB390	NDQZ000SB390
D016	SCHOTTKY BARRIER DIODE SB240-B/P	NDQZ000SB240
D019	PCB JUMPER D0.6-P5.0	JW5.0T
D031	ZENER DIODE MTZJT-7716B	QDTB00MTZJ16
D035	ZENER DIODE MTZJT-776.8B	QDTB0MTZJ6R8
D040	ZENER DIODE MTZJT-776.8B	QDTB0MTZJ6R8
D052	ZENER DIODE MTZJT-7710B	QDTB00MTZJ10
D063	PCB JUMPER D0.6-P5.0	JW5.0T
D080	RECTIFIER DIODE 1N4005	NDQZ001N4005
D082	RECTIFIER DIODE 1N4005	NDQZ001N4005
D504	ZENER DIODE MTZJT-7718B	QDTB00MTZJ18
D555	LED MIE-534A2	NPZZM1E534A2
D564	LED(GREEN) 204-10GD/S957	NPQZ10GDS957
D565	LED(GREEN) 204-10GD/S957	NPQZ10GDS957
D566	LED(GREEN) 204-10GD/S957	NPQZ10GDS957
D567	LED(GREEN) 204-10GD/S957	NPQZ10GDS957
D701	ZENER DIODE MTZJT-7733D	QDTD00MTZJ33
D777	ZENER DIODE MTZJT-775.6A	QDTA0MTZJ5R6
D1001	RECTIFIER DIODE 1N4005	NDQZ001N4005
D1002	RECTIFIER DIODE 1N4005	NDQZ001N4005
D1003	RECTIFIER DIODE 1N4005	NDQZ001N4005
D1004	RECTIFIER DIODE 1N4005	NDQZ001N4005
D1007	PCB JUMPER D0.6-P5.0	JW5.0T
D1008	SCHOTTKY BARRIER DIODE SB140	NDQZ000SB140
D1010	RECTIFIER DIODE BA158	NDQZ000BA158
D1011	RECTIFIER DIODE BA158	NDQZ000BA158
D1012	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1018	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1020	SCHOTTKY BARRIER DIODE SB140	NDQZ000SB140
D1021	PCB JUMPER D0.6-P5.0	JW5.0T
D1022	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1024	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1025	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1036	RECTIFIER DIODE 1N4005	NDQZ001N4005
D1037	RECTIFIER DIODE 1N4005	NDQZ001N4005
D1038	RECTIFIER DIODE 1N4005	NDQZ001N4005
D1058	RECTIFIER DIODE 1N4005	NDQZ001N4005
D2001	LED(GREEN) 204-10GD/S957	NPQZ10GDS957
D2002	LED(GREEN) 204-10GD/S957	NPQZ10GDS957
D2003	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
ICs		
IC301	IC Y/C/A LA71205M-MPB-E	QSZBA0RSY037
IC501	IC SYSCON MN101D08DYG	QSZAA0RMS072
IC751	IC ANALOG MULTIPLEXER CD4053BNSR	NSZBA0TTY093
IC1001▲	PHOTOCOUPLER PS2561A-1(W)	QPEWPS2561A1
IC1002	VOLTAGE REGULATOR PQ1LAX95MSPQ	QSZBA0TSH053
IC1004	VOLTAGE REGULATOR PQ1LAX95MSPQ	QSZBA0TSH053
IC1201	IC OP AMP KIA4558P/P	NSZBA0SJY035
IC1402	DRIVER FOR DVD MM1637XVBE	QSZBA0TMM102
COILS		
L009	RADIAL TYPE CHOKE COIL CW68-470K-841040NP	LLBD00PKV023
L251	PCB JUMPER D0.6-P5.0	JW5.0T
L303	INDUCTOR(100μH K) LAP02TA101K	LLAXKATTU101
L304	RADIAL TYPE CHOKE COIL CW68-470K-841040NP	LLBD00PKV023
L305	CHIP RES.(1608) 1/10W 0 Ω	RRXAZB5Z0000
L306	CHIP RES.(1608) 1/10W 0 Ω	RRXAZB5Z0000
L400	INDUCTOR 22μH-K-26T	LLAXKATTU220
L502	RADIAL TYPE CHOKE COIL CW68-470K-841040NP	LLBD00PKV023
L503	INDUCTOR 12μH-K-26T	LLAXKATTU120
L504	PCB JUMPER D0.6-P5.0	JW5.0T

Ref. No.	Description	Part No.
L771	PCB JUMPER D0.6-P5.0	JW5.0T
L1001▲	LINE FILTER 27MH TLF14CB2730R4	LLBG00ZTU034
L1004	BEAD CORE B16 RH 3.5X10X1.3	XL03010XMO01
L1007	RADIAL TYPE CHOKE COIL CW68-470K-841040NP	LLBD00PKV023
L1020	RADIAL TYPE CHOKE COIL CW68-470K-841040NP	LLBD00PKV023
L1350	INDUCTOR(100 μ H K) LAP02TA101K	LLAXKATTU101
L1351	INDUCTOR(0.47 μ H K) LAP02TAR47K	LLAXKATTUR47
L1522	INDUCTOR 47 μ H-K-5FT	LLARKBSTU470
L2001	INDUCTOR(100 μ H K) LAP02TA101K	LLAXKATTU101
TRANSISTORS		
Q031	TRANSISTOR KTA1267-Y-AT/P	NQSYKTA1267P
Q052	NPN TRANSISTOR KRC103M-AT/P	NQSZKRC103MP
Q055	TRANSISTOR KTC3198-Y-AT/P	NQSYKTC3198P
Q056	TRANSISTOR KTC3203-Y-AT/P	NQSYKTC3203P
Q301	TRANSISTOR KTA-1266-GR-AT/P	NQS4KTA1266P
Q302	TRANSISTOR KTC3193-Y-AT/P	NQSYKTC3193P
Q303	TRANSISTOR KTC3193-Y-AT/P	NQSYKTC3193P
Q391	TRANSISTOR KTA-1266-GR-AT/P	NQS4KTA1266P
Q501	TRANSISTOR KTC3199-BL-AT/P	NQSS5KTC3199P
Q506	PHOTO TRANSISTOR PT204-6B-12	NPWZT2046B12
Q1001▲	FET 2SK3543(Q)	QFWZ2SK3543Q
Q1003	TRANSISTOR 2SC1815-Y(TE2 F T)	QQSY2SC1815F
Q1004	TRANSISTOR 2SC2001-T-A-K	QQSK2SC2001A
Q1005	TRANSISTOR KTC3199-Y-AT/P	NQSYKTC3199P
Q1006	TRANSISTOR KTA1267-Y-AT/P	NQSYKTA1267P
Q1008	TRANSISTOR KTC3199-Y-AT/P	NQSYKTC3199P
Q1011	TRANSISTOR KTC3203-Y-AT/P	NQSYKTC3203P
Q1201	TRANSISTOR KTC3199-Y-AT/P	NQSYKTC3199P
Q1202	TRANSISTOR KTC3199-Y-AT/P	NQSYKTC3199P
Q1204	TRANSISTOR KTA-1266-GR-AT/P	NQS4KTA1266P
Q1351	TRANSISTOR KTC3199-Y-AT/P	NQSYKTC3199P
Q2002	TRANSISTOR KTC3199-Y-AT/P	NQSYKTC3199P
Q2013	TRANSISTOR KTC3199-Y-AT/P	NQSYKTC3199P
RESISTORS		
R001▲	GLASS GLAZE RES. 1/2W J 3.3M Ω	RXX2JZL0335
R031	CHIP RES. 1/10W J 1k Ω	RRXAJB5Z0102
R032	CHIP RES. 1/10W J 4.7k Ω	RRXAJB5Z0472
R034	CHIP RES. 1/10W F 2.2k Ω	RRXAFB5H2201
R039	CHIP RES. 1/10W F 4.7k Ω	RRXAFB5H4701
R041	CHIP RES. 1/10W J 18k Ω	RRXAJB5Z0183
R042	CHIP RES. 1/10W J 1.8k Ω	RRXAJB5Z0182
R056	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R057	CARBON RES. 1/4W J 150 Ω	RCX4JATZ0151
R063	PCB JUMPER D0.6-P5.0	JW5.0T
R073	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R075	CARBON RES. 1/6W J 4.7k Ω	RCX6JATZ0472
R092	CARBON RES. 1/4W J 8.2k Ω	RCX4JATZ0822
R095	CARBON RES. 1/4W J 8.2k Ω	RCX4JATZ0822
R301	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R302	CHIP RES. 1/10W J 12k Ω	RRXAJB5Z0123
R304	CHIP RES. 1/10W J 1.2k Ω	RRXAJB5Z0122
R306	CHIP RES. 1/10W J 3.9M Ω	RRXAJB5Z0395
R307	CHIP RES. 1/10W J 100k Ω	RRXAJB5Z0104
R308	CHIP RES. 1/10W J 82k Ω	RRXAJB5Z0823
R309	CHIP RES. 1/10W J 2.2k Ω	RRXAJB5Z0222
R310	CHIP RES. 1/10W J 4.7k Ω	RRXAJB5Z0472
R311	CHIP RES. 1/10W J 1.8k Ω	RRXAJB5Z0182
R312	CHIP RES. 1/10W J 1.8k Ω	RRXAJB5Z0182
R313	CHIP RES. 1/10W J 1.8k Ω	RRXAJB5Z0182
R314	CHIP RES. 1/10W J 680k Ω	RRXAJB5Z0684
R315	CHIP RES.(1608) 1/10W 0 Ω	RRXAZB5Z0000

Ref. No.	Description	Part No.
R316	CHIP RES. 1/10W J 2.2k Ω	RRXAJB5Z0222
R317	CHIP RES. 1/10W J 8.2k Ω	RRXAJB5Z0822
R318	CHIP RES.(1608) 1/10W 0 Ω	RRXAZB5Z0000
R319	CHIP RES.(1608) 1/10W 0 Ω	RRXAZB5Z0000
R320	CHIP RES.(1608) 1/10W 0 Ω	RRXAZB5Z0000
R321	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R322	CHIP RES. 1/10W J 18k Ω	RRXAJB5Z0183
R323	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R324	CHIP RES. 1/10W J 18k Ω	RRXAJB5Z0183
R330	CHIP RES. 1/10W J 100k Ω	RRXAJB5Z0104
R391	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R392	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R397	CHIP RES. 1/10W J 100 Ω	RRXAJB5Z0101
R409	CHIP RES. 1/10W J 8.2k Ω	RRXAJB5Z0822
R410	CHIP RES. 1/10W J 12k Ω	RRXAJB5Z0123
R411	CHIP RES. 1/10W J 330k Ω	RRXAJB5Z0334
R412	CHIP RES. 1/10W F 130 Ω	RRXAFB5H1300
R413	CHIP RES. 1/10W J 22k Ω	RRXAJB5Z0223
R414	CHIP RES. 1/10W J 910 Ω	RRXAJB5Z0911
R415	CHIP RES. 1/10W J 2.2k Ω	RRXAJB5Z0222
R416	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R428	PCB JUMPER D0.6-P5.0	JW5.0T
R470	CHIP RES.(1608) 1/10W 0 Ω	RRXAZB5Z0000
R502	CHIP RES. 1/10W J 2.2k Ω	RRXAJB5Z0222
R503	CHIP RES. 1/10W J 820 Ω	RRXAJB5Z0821
R504	CHIP RES. 1/10W J 100k Ω	RRXAJB5Z0104
R506	CHIP RES. 1/10W J 100k Ω	RRXAJB5Z0104
R511	CHIP RES. 1/10W J 39k Ω	RRXAJB5Z0393
R512	CHIP RES. 1/10W J 100 Ω	RRXAJB5Z0101
R518	CHIP RES. 1/10W J 220k Ω	RRXAJB5Z0224
R523	CHIP RES. 1/10W J 2.2k Ω	RRXAJB5Z0222
R524	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R525	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R526	CHIP RES. 1/10W J 1k Ω	RRXAJB5Z0102
R527	CHIP RES. 1/10W J 1k Ω	RRXAJB5Z0102
R528	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R531	CARBON RES. 1/6W G 4.7k Ω	RCX6GATZ0472
R532	CARBON RES. 1/6W G 1.5k Ω	RCX6GATZ0152
R533	CARBON RES. 1/6W G 22k Ω	RCX6GATZ0223
R534	CARBON RES. 1/6W G 470 Ω	RCX6GATZ0471
R535	CARBON RES. 1/6W G 10k Ω	RCX6GATZ0103
R536	CARBON RES. 1/6W G 3.6k Ω	RCX6GATZ0362
R537	CHIP RES. 1/10W J 33k Ω	RRXAJB5Z0333
R540	CHIP RES. 1/10W J 390k Ω	RRXAJB5Z0394
R541	CHIP RES. 1/10W J 390k Ω	RRXAJB5Z0394
R542	CARBON RES. 1/4W J 270 Ω	RCX4JATZ0271
R544	CHIP RES. 1/10W J 18k Ω	RRXAJB5Z0183
R545	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R546	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R550	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R552	CHIP RES. 1/10W J 1k Ω	RRXAJB5Z0102
R557	CHIP RES.(1608) 1/10W 0 Ω	RRXAZB5Z0000
R559	CHIP RES.(1608) 1/10W 0 Ω	RRXAZB5Z0000
R563	CHIP RES. 1/10W J 1k Ω	RRXAJB5Z0102
R568	CARBON RES. 1/4W J 120 Ω	RCX4JATZ0121
R573	CARBON RES. 1/4W J 120 Ω	RCX4JATZ0121
R574	CARBON RES. 1/4W J 120 Ω	RCX4JATZ0121
R576	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R577	CHIP RES.(1608) 1/10W 0 Ω	RRXAZB5Z0000
R580	CARBON RES. 1/4W J 150 Ω	RCX4JATZ0151
R583	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R585	CHIP RES. 1/10W J 1k Ω	RRXAJB5Z0102
R586	CHIP RES. 1/10W J 1.2k Ω	RRXAJB5Z0122

Ref. No.	Description	Part No.
R587	CHIP RES. 1/10W J 1.5k Ω	RRXAJB5Z0152
R590	CHIP RES. 1/10W J 1k Ω	RRXAJB5Z0102
R591	CHIP RES. 1/10W J 1.2k Ω	RRXAJB5Z0122
R593	CHIP RES. 1/10W J 1.8k Ω	RRXAJB5Z0182
R594	CHIP RES. 1/10W J 1.8k Ω	RRXAJB5Z0182
R596	CARBON RES. 1/4W J 120 Ω	RCX4JATZ0121
R606	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R607	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R610	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R612	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R618	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R620	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R702	CARBON RES. 1/4W J 1.8k Ω	RCX4JATZ0182
R758	CARBON RES. 1/6W J 75 Ω	RCX6JATZ0750
R774	CARBON RES. 1/4W J 3.9k Ω	RCX4JATZ0392
R777	CARBON RES. 1/4W J 2.7k Ω	RCX4JATZ0272
R788	PCB JUMPER D0.6-P5.0	JW5.0T
R1004	METAL OXIDE FILM RES. 2W J 82k Ω	RN02JZLZ0823
R1005	CARBON RES. 1/4W J 1M Ω	RCX4JATZ0105
R1006	CARBON RES. 1/4W J 1M Ω	RCX4JATZ0105
R1007	PCB JUMPER D0.6-P5.0	JW5.0T
R1008	CARBON RES. 1/6W G 1k Ω	RCX6GATZ0102
R1010	CARBON RES. 1/6W J 22k Ω	RCX6JATZ0223
R1011	METAL OXIDE FILM RES. 1W J 0.68 Ω	RN01R68ZU001
R1020	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R1025	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R1026	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R1029	CARBON RES. 1/6W J 150k Ω	RCX6JATZ0154
R1032	CARBON RES. 1/4W J 1.2k Ω	RCX4JATZ0122
R1034	CARBON RES. 1/4W J 680k Ω	RCX4JATZ0684
R1035	METAL OXIDE FILM RES.(STRAIGHT 2W J 1.2 Ω	RN02JZLZ01R2
R1036	CARBON RES. 1/6W J 100k Ω	RCX6JATZ0104
R1037	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R1038	CARBON RES. 1/6W J 100k Ω	RCX6JATZ0104
R1039	CARBON RES. 1/6W J 470k Ω	RCX6JATZ0474
R1043	METAL OXIDE FILM RES. 1W J 2.7 Ω	RN012R7ZU001
R1044	CHIP RES. 1/10W J 220k Ω	RRXAJB5Z0224
R1059	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R1068	CARBON RES. 1/4W J 390 Ω	RCX4JATZ0391
R1076	CHIP RES. 1/10W J 22k Ω	RRXAJB5Z0223
R1077	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R1085	CHIP RES. 1/10W J 100 Ω	RRXAJB5Z0101
R1086	CHIP RES. 1/10W J 2.2k Ω	RRXAJB5Z0222
R1087	CHIP RES. 1/10W J 1k Ω	RRXAJB5Z0102
R1090	CHIP RES. 1/10W J 5.6k Ω	RRXAJB5Z0562
R1091	CHIP RES. 1/10W J 3.3k Ω	RRXAJB5Z0332
R1092	CARBON RES. 1/4W J 82 Ω	RCX4JATZ0820
R1093	CARBON RES. 1/4W J 82 Ω	RCX4JATZ0820
R1205	CARBON RES. 1/6W G 12k Ω	RCX6GATZ0123
R1206	CHIP RES.(1608) 1/10W F 12k Ω	RRXAFB5Z1202
R1207	CHIP RES.(1608) 1/10W 0 Ω	RRXAZB5Z0000
R1208	CHIP RES.(1608) 1/10W 0 Ω	RRXAZB5Z0000
R1209	CHIP RES. 1/10W F 30k Ω	RRXAFB5H3002
R1210	CHIP RES. 1/10W F 30k Ω	RRXAFB5H3002
R1221	CHIP RES. 1/10W J 100k Ω	RRXAJB5Z0104
R1222	CHIP RES. 1/10W J 100k Ω	RRXAJB5Z0104
R1223	CHIP RES. 1/10W J 470 Ω	RRXAJB5Z0471
R1224	CHIP RES. 1/10W J 470 Ω	RRXAJB5Z0471
R1225	CHIP RES. 1/10W J 1k Ω	RRXAJB5Z0102
R1226	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R1238	CHIP RES.(1608) 1/10W 0 Ω	RRXAZB5Z0000
R1240	CHIP RES. 1/10W J 100k Ω	RRXAJB5Z0104

Ref. No.	Description	Part No.
R1245	CARBON RES. 1/6W J 10 Ω	RCX6JATZ0100
R1351	CHIP RES. 1/10W J 1.8k Ω	RRXAJB5Z0182
R1352	CHIP RES. 1/10W J 2.2k Ω	RRXAJB5Z0222
R1353	CHIP RES. 1/10W J 2.2k Ω	RRXAJB5Z0222
R1354	CHIP RES. 1/10W J 220 Ω	RRXAJB5Z0221
R1355	CHIP RES. 1/10W J 75 Ω	RRXAJB5Z0750
R1356	CHIP RES. 1/10W J 100k Ω	RRXAJB5Z0104
R1395	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R1421	CHIP RES. 1/10W F 130 Ω	RRXAFB5H1300
R1422	CHIP RES. 1/10W J 75 Ω	RRXAJB5Z0750
R1441	CHIP RES. 1/10W F 130 Ω	RRXAFB5H1300
R1442	CHIP RES. 1/10W J 75 Ω	RRXAJB5Z0750
R1443	CHIP RES. 1/10W J 75 Ω	RRXAJB5Z0750
R1461	CHIP RES. 1/10W F 130 Ω	RRXAFB5H1300
R1462	CHIP RES. 1/10W J 75 Ω	RRXAJB5Z0750
R1481	CHIP RES. 1/10W F 130 Ω	RRXAFB5H1300
R1482	CHIP RES. 1/10W J 75 Ω	RRXAJB5Z0750
R1490	CHIP RES.(1608) 1/10W 0 Ω	RRXAZB5Z0000
R1521	CHIP RES. 1/10W J 2.2k Ω	RRXAJB5Z0222
R2001	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R2002	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R2003	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R2005	CHIP RES. 1/10W J 6.8k Ω	RRXAJB5Z0682
R2006	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R2028	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R2031	CHIP RES. 1/10W J 22k Ω	RRXAJB5Z0223
R2051	CARBON RES. 1/4W J 3.9k Ω	RCX4JATZ0392
R2052	CARBON RES. 1/4W J 3.9k Ω	RCX4JATZ0392
R2053	CARBON RES. 1/4W J 180 Ω	RCX4JATZ0181
R2054	CARBON RES. 1/4W J 180 Ω	RCX4JATZ0181
R2055	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R2056	CHIP RES. 1/10W J 10k Ω	RRXAJB5Z0103
R2086	CHIP RES. 1/10W J 5.6k Ω	RRXAJB5Z0562

SWITCHES

SW502	TAUT SWITCH KSM0614B	SST0101HH013
SW508	TAUT SWITCH KSM0614B	SST0101HH013
SW509	TAUT SWITCH KSM0614B	SST0101HH013
SW512	ROTARY MODE SWITCH SSS-53MD	SSR0106KB003
SW515	TAUT SWITCH KSM0614B	SST0101HH013
SW516	TAUT SWITCH KSM0614B	SST0101HH013
SW2002	TAUT SWITCH KSM0614B	SST0101HH013
SW2003	TAUT SWITCH KSM0614B	SST0101HH013
SW2005	TAUT SWITCH KSM0614B	SST0101HH013
SW2006	TAUT SWITCH KSM0614B	SST0101HH013

MISCELLANEOUS

2B11	HEAD SHIELD H9600UD	OVM306770
2B15	BUSH LED(F) H3700UD	OVM409508
2L062	SCREW B-TIGHT M3X8 BIND HEAD+	GBHB3080
A5	JACK COVER(RCA) E8C6AUD	1VM323521
AC1001▲	AC CORD W/O A GND WIRE UL/CSA 1770 BLACK	WAC0172LTE17
F1001▲	FUSE TIME RAG SIC 1A 250V UC PSE	PEG20C0W3002
FH1001	FUSE HOLDER MSF-015 LF (B110)	XH01Z00LY002
FH1002	FUSE HOLDER MSF-015 LF (B110)	XH01Z00LY002
JC11	CHIP RES.(1608) 1/10W 0 Ω	RRXAZB5Z0000
JC782	CHIP RES.(1608) 1/10W 0 Ω	RRXAZB5Z0000
JK751	RCA JACK MSP-283V-B-324NLF01	JXRL040LY141
JK756	RCA JACK 2P MSP-282V-12 NILF(B11)	JXRL020LY121
JK1202	RCA JACK MSP-281V41-B(B110)	JXRL010LY140
JK1401	S TYPE JACK MDC-050V-2.4 LF(B110	JXEL040LY003
JK1403	RCA JACK MSP-283V-B-752 NI LF	JXRL040LY122
RM2001	REMOTE RECEIVER PIC-37042LU	USESJSRSK033
T001▲	SWITCHING TRANSFORMER BCK-28-0550	LTT00CPXB017

Ref. No.	Description	Part No.
TP301	PCB JUMPER D0.6-P16.5	JW16.5T
TP302	PCB JUMPER D0.6-P16.0	JW16.0T
TP506	PCB JUMPER D0.6-P8.0	JW8.0T
TP507	PCB JUMPER D0.6-P7.0	JW7.0T
TP513	PCB JUMPER D0.6-P7.5	JW7.5T
TP751	PCB JUMPER D0.6-P23.5	JW23.5T
TP753	PCB JUMPER D0.6-P25.5	JW25.5T
TP754	PCB JUMPER D0.6-P22.5	JW22.5T
VR501	CARBON P.O.T. VZ067TL1 B104 PB(F)	VRCB104HH014
W002	FFC CABLE 26P FFC/P1.00/230	WX1H9600-002
W006	WIRE ASSEMBLY FFC 13 192 WHITE	WX1E8A00-005
X301	XTAL 3.579545MHz(20PPM)	FXC355LLN004

POWER SW CBA

Ref. No.	Description	Part No.
	POWER SW CBA (MCV-B) Consists of the following:	-----
DIODE		
D561	LED(RED) 204HD/E	NPQZ00204HDE
SWITCH		
SW518	TACT SWITCH KSM0614B	SST0101HH013
MISCELLANEOUS		
2B13	BUSH LED(E) H1600UD	0VM408832
W013	WIRE ASSEMBLY 4P 04 60 GRAY	WX1E8C6A-001

DVD OPEN/CLOSE CBA

Ref. No.	Description	Part No.
	DVD OPEN/CLOSE CBA (MCV-C) Consists of the following:	-----
SWITCH		
SW2001	TACT SWITCH KSM0614B	SST0101HH013
MISCELLANEOUS		
W011	WIRE ASSEMBLY 02 130 GRAY	WX1E8A00-001

SENSOR CBA

Ref. No.	Description	Part No.
	SENSOR CBA Consists of the following:	1VSA13493
TRANSISTORS		
Q503	PHOTO TRANSISTOR PT204-6B-12	NPWZT2046B12
Q504	PHOTO TRANSISTOR PT204-6B-12	NPWZT2046B12

DV200MW8
E8E60UD
2006-12-27

MAGNAVOX SERVICE MANUAL

This service manual supplement is for the DV200MW8(E8E61UD) model, which is different from the DV200MW8(E8E60UD) model.

For the DV200MW8(E8E61UD) model, the letter (E8E61UD) is printed on the Rating Label on the back of the unit.

Refer to the Rating Label illustration on the right.

This service manual shows only the differences between the DV200MW8(E8E61UD) model and the DV200MW8(E8E60UD) model. All other information is described in the service manual of the DV200MW8(E8E60UD) model.

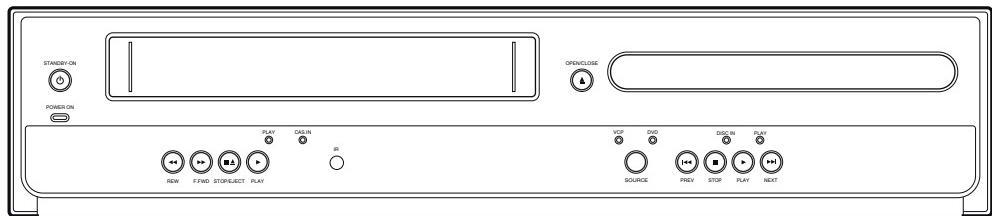
Rating Label



"E8E61UD"

DVD PLAYER & VIDEO CASSETTE PLAYER

DV200MW8



Different parts from the DV200MW8(E8E60UD) model

Ref. No.	Description	Part No.
MECHANICAL PARTS		
A10▲	RATING LABEL(U) E8E61UD	-----
ELECTRICAL PARTS		
	DVD MAIN CBA UNIT	N79FNKUP

© 2007 Funai Electric Co., Ltd.

All rights reserved. No part of this manual may be reproduced, copied, transmitted, disseminated, transcribed, downloaded or stored in any storage medium, in any form or for any purpose without the express prior written consent of Funai. Furthermore, any unauthorized commercial distribution of this manual or any revision hereto is strictly prohibited.

Information in this document is subject to change without notice. Funai reserves the right to change the content herein without the obligation to notify any person or organization of such changes.

FUNAI with the  design is a registered trademark of Funai Electric Co., Ltd and may not be used in any way without the express written consent of Funai. All other trademarks used herein remain the exclusive property of their respective owners. Nothing contained in this manual should be construed as granting, by implication or otherwise, any license or right to use any of the trademarks displayed herein. Misuse of any trademarks or any other content in this manual is strictly prohibited. Funai shall aggressively enforce its intellectual property rights to the fullest extent of the law.